FOREWORD

This wiring diagram has been prepared to provide information on the electrical system of the 1990 TOYOTA CELICA (FWD).

Applicable models: AT180 Series
ST184 Series

For service specifications and repair procedures of the above models other than those listed in this manual, refer to the following manuals:

Manual Name	Pub. No.
• 1990 Celica Repair Manual • 1990 Celica New Car Features	RM149U NCF056U

All information in this manual is based on the latest product information at the time of publication. However, specifications and procedures are subject to change without notice.

TOYOTA MOTOR CORPORATION

NOTICE

This vehicle has an SRS AIRBAG (referred to as the airbag in the remainder of this manual).

When handling airbag components (removal, installation or inspection, etc.), always follow the directions given in the repair manuals listed above to prevent the occurrence of accidents and airbag malfunction.

INTRODUCTION

This manual consists of the following 12 sections:

No.	Section	Description
1	INDEX	Index of the contents of this manual.
2	INTRODUCTION	Brief explanation of each section.
3	HOW TO USE THIS MANUAL	Instructions on how to use this manual.
4	TROUBLE–SHOOTING	Describes the basic inspection procedures for electrical circuits.
5	ABBREVIATIONS	Defines the abbreviations used in this manual.
6	GLOSSARY OF TERMS AND SYMBOLS	Defines the symbols and functions of major parts.
7	RELAY LOCATIONS	Shows position of the Electronic Control Unit, Relays, Relay Block, etc. This section is closely related to the system circuit.
8	ELECTRICAL WIRE ROUTING	Describes position of Parts Connectors, Splice points, Ground points, etc. This section is closely related to the system circuit.
9	POWER SOURCE (Current Flow Chart)	Describes power distribution from the power supply to various electrical loads.
10	INDEX	Index of the system circuits.
11	SYSTEM CIRCUITS	Electrical circuits of each system are shown from the power supply through ground points. Wiring connections and their positions are shown and classified by code according to the connection method. (Refer to the section, “How to use this manual”). The “System Outline” and “Service Hints” useful for troubleshooting are also contained in this section.
	GROUND POINTS	Shows ground positions of all parts described in this manual.
12	OVERALL WIRING DIAGRAM	Provides circuit diagrams showing the circuit connections.

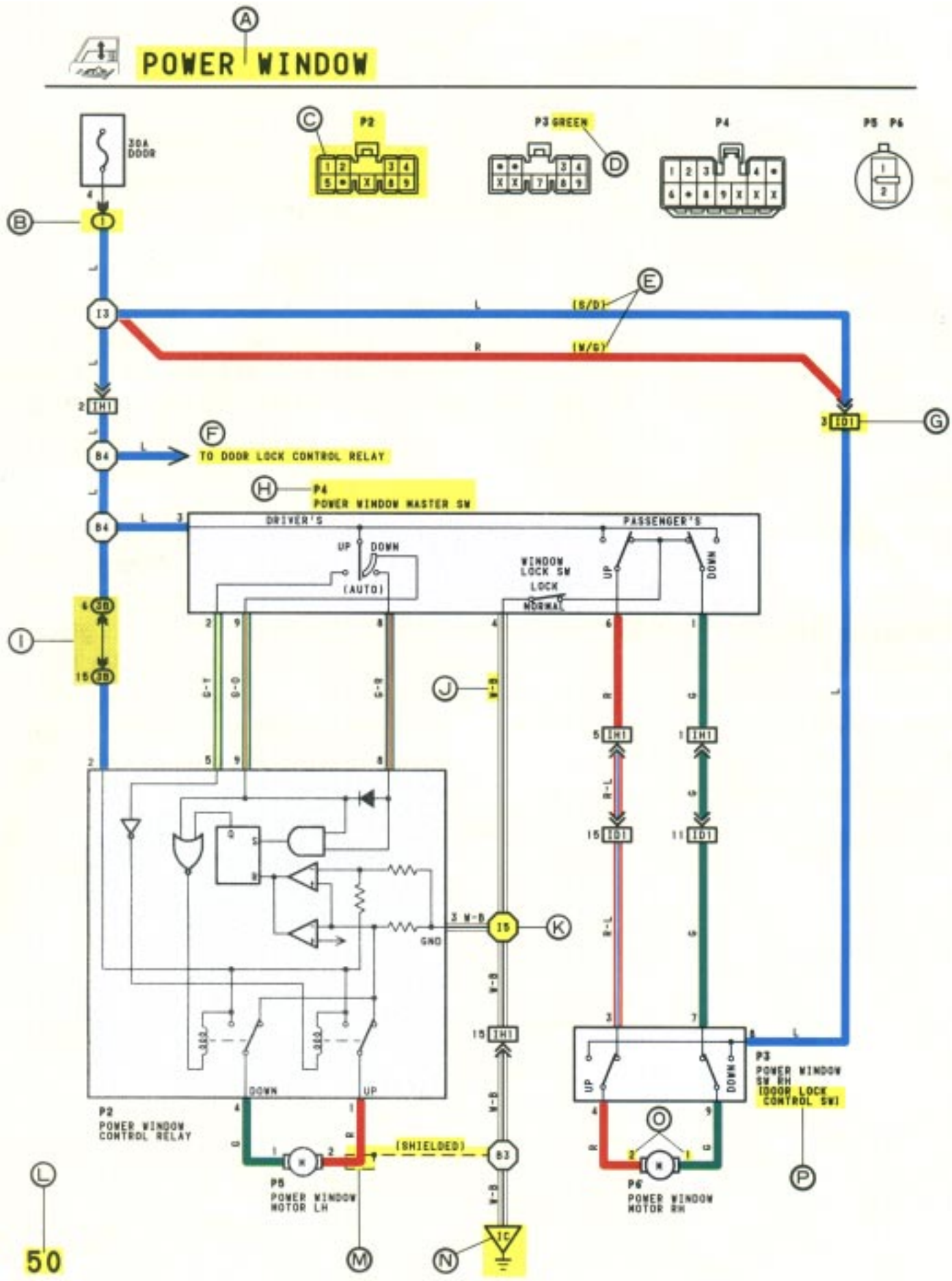
This manual provides information on the electrical circuits installed on vehicles by dividing them into each system circuit.

The actual wiring of each system circuit is shown from the point where the power source is received from the battery as far as each ground point. (All circuit diagrams are shown with the switches in the OFF position.)

When troubleshooting any problem, first understand the operation of the circuit where the problem was detected (see System Circuit section), the power source supplying power to that circuit (see Power Source section), and the ground points (see Ground Points section). See the System Outline to understand the circuit operation.

When the circuit operation is understood, begin troubleshooting of the problem circuit to isolate the cause. Use Relay Location and Electrical Wire Routing sections to find each part, junction block and wiring harness connectors, wiring harness and wiring harness connectors, splice points, and ground points of each system circuit. Internal wiring for each junction block is also provided for better understanding of connection within a junction block.

Wiring related to each system is indicated in each system circuit by arrows (from __ , to __). When overall connections are required, see the Overall Wiring Diagram at the end of this manual.


A
POWER WINDOW
30A DOOR
C
P2
P3 GREEN
D
P4
P5 P6
B
I3
E
(S/D)
(M/G)
IH1
ID1
G
F
TO DOOR LOCK CONTROL RELAY
H
P4
POWER WINDOW MASTER SW
DRIVER'S
PASSENGER'S
UP
DOWN
(AUTO)
WINDOW LOCK SW
LOCK
NORMAL
I
J
K
GND
P2
POWER WINDOW CONTROL RELAY
P5
POWER WINDOW MOTOR LH
(SHIELDED)
P6
POWER WINDOW MOTOR RH
P3
POWER WINDOW SW RH
(DOOR LOCK CONTROL SW)
L
M
N
O
P

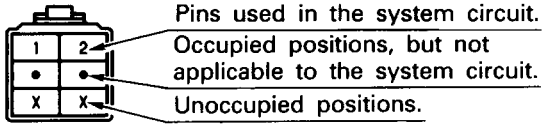
Ⓐ : System Title

Ⓑ : Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B.

Example: Indicates Relay Block No. 1.

Ⓒ : Indicates the connector to be connected to a part (the numeral indicates the pin No.)

Explanation of pin use.



The pins shown are only for the highest grade, or only include those in the specification.

Ⓓ : Connector Color

Connectors not indicated are milky white in color.

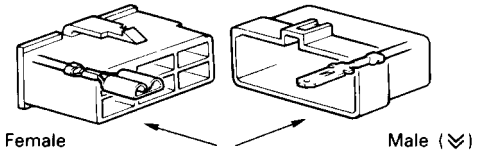
Ⓔ : () is used to indicate different wiring and connector, etc. when the vehicle model, engine type, or specification is different.

Ⓕ : Indicates related system.

Ⓖ : Indicates the wiring harness and wiring harness connector. The wiring harness with male terminal is shown with arrows (⩔).

Outside numerals are pin numbers.

- All connectors are shown from the open end, and the lock is on top.



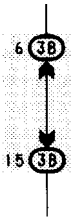
The first letter of the code for each wiring harness and wiring harness connector(s) indicates the component's location, e.g., "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

When more than one code has the first and second letters in common, followed by numbers (e.g., IH1, IH2), this indicates the same type of wiring harness and wiring harness connector.

Ⓗ : Represents a part (all parts are shown in sky blue). The code is the same as the code used in parts position.

Ⓘ : Junction Block (The number in the circle is the J/B No. and the connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts (different junction blocks are shaded differently for further clarification).

Example:



3B indicates that it is inside Junction Block No. 3.

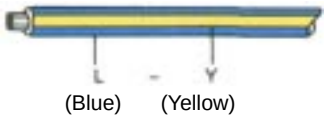
Ⓙ : Indicates the wiring color.

Wire colors are indicated by an alphabetical code.

B	= Black	L	= Blue	R	= Red
BR	= Brown	LG	= Light Green	V	= Violet
G	= Green	O	= Orange	W	= White
GR	= Gray	P	= Pink	Y	= Yellow

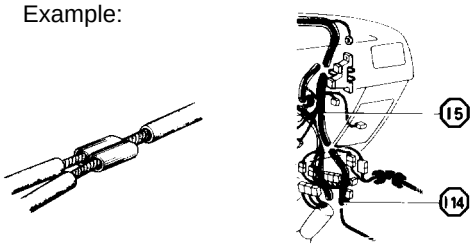
The first letter indicates the basic wire color and the second letter indicates the color of the stripe.

Example: L – Y



Ⓚ : Indicates a wiring Splice Point (Codes are "E" for the Engine Room, "I" for the Instrument Panel, and "B" for the Body).

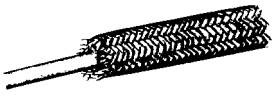
Example:



The Location of Splice Point I 5 is indicated by the shaded section.

Ⓛ : Page No.

Ⓜ : Indicates a sealed wiring harness.



Ⓝ : Indicates a ground point.

The first letter of the code for each ground point(s) indicates the component's location, e.g., "E" for the Engine Compartment, "I" for the Instrument Panel and Surrounding area, and "B" for the Body and Surrounding area.

Ⓞ : Indicates the pin number of the connector.

The numbering system is different for female and male connectors.

Example:

Numbered in order from upper left to lower right	Numbered in order from upper right to lower left



Ⓟ : When 2 parts both use one connector in common, the parts connector name used in the wire routing section is shown in square brackets [].

Q

SYSTEM OUTLINE

WITH THE IGNITION SW TURNED ON, THE CURRENT FLOWS TO TERMINAL 3 OF THE POWER WINDOW MASTER SW, TERMINAL 2 OF THE POWER WINDOW CONTROL RELAY AND TERMINAL 8 OF THE POWER WINDOW SW THROUGH THE DOOR FUSE.

1. DRIVER'S WINDOW "MANUAL UP" OPERATION BY MASTER SW

HOLDING MANUAL SW (DRIVER'S) ON "UP" POSITION LOCATED IN POWER WINDOW MASTER SW, THE CURRENT FLOWS TO TERMINAL 5 OF THE POWER WINDOW CONTROL RELAY THROUGH TERMINAL 3 OF THE MASTER SW → TERMINAL 2 TO OPERATE A POWER WINDOW CONTROL RELAY. THUS THE CURRENT INSIDE THE RELAY FLOWS FROM TERMINAL 2 OF THE RELAY → TERMINAL 1 → TERMINAL 2 OF THE POWER WINDOW MOTOR → TERMINAL 1 → TERMINAL 4 OF THE RELAY → TERMINAL 3 → TO GROUND. THE MOTOR TURNS TO ASCENT THE WINDOW. RELEASING THIS SW, THE ROTATION OF MOTOR IS STOPPED AND THE WINDOWS CAN STOP AT WILL POINT.

(FOR THE "MANUAL DOWN" OPERATION, CURRENT FLOWS IN THE REVERSE DIRECTION BECAUSE THE TERMINALS WHERE IT FLOWS ARE CHANGED).

2. DRIVER'S WINDOW "AUTO DOWN" OPERATION BY MASTER SW

ONCE THE "AUTO DOWN" BUTTON OF THE MASTER SW IS PUSHED, THE CURRENT FLOWS TERMINAL 9 OF THE POWER WINDOW CONTROL RELAY THROUGH TERMINAL 3 OF THE MASTER SW → TERMINALS 8 AND 9 TO OPERATE THE RELAY. THUS THE CURRENT INSIDE THE POWER WINDOW CONTROL RELAY FLOWS FROM TERMINAL 2 OF THE RELAY → TERMINAL 4 → TERMINAL 1 OF THE POWER WINDOW MOTOR → TERMINAL 2 → TERMINAL 1 OF THE RELAY → TERMINAL 3 → TO GROUND. THE MOTOR CONTINUES THE ROTATION ENABLING TO DESCENT THE WINDOW.

THE WINDOW DESCENDS TO THE END POSITION. THE CURRENT WILL BE CUT OFF TO RELEASE THE AUTO DOWN FUNCTION BASED ON THE INCREASING CURRENT BETWEEN TERMINAL 2 OF THE RELAY AND TERMINAL 1 IN RELAY.

3. DRIVER'S WINDOW AUTO DOWN RELEASE OPERATION BY MASTER SW

HOLDING THE MANUAL SW (DRIVER'S) ON "UP" POSITION IN OPERATING AUTO DOWN. THE CURRENT FROM TERMINAL 3 OF THE MASTER SW PASSING TERMINAL 2 FLOWS TERMINAL 5 OF THE RELAY AND RELEASES THE AUTO DOWN FUNCTION IN THE POWER WINDOW CONTROL RELAY. RELEASING THE HAND FROM SW, WINDOW STOPS AND CONTINUING ON TOUCHING SW, THE FUNCTION SWITCHES TO MANUAL UP OPERATION.

4. PASSENGER'S WINDOW UP OPERATION (MASTER SW) AND WINDOW LOCK SW OPERATION

HOLDING PASSENGER'S WINDOW SW (MASTER SW) ON "UP", THE CURRENT FLOWS FROM TERMINAL 3 OF THE MASTER SW PASSING TERMINAL 6 TO TERMINAL 3 OF THE POWER WINDOW SW (PASSENGER'S) → TERMINAL 4 → TERMINAL 2 OF THE MOTOR → TERMINAL 1 → TERMINAL 9 OF THE POWER WINDOW SW → TERMINAL 7 → TERMINAL 1 OF THE MASTER SW → TERMINAL 4 TO GROUND. THE MOTOR RUNS TO ASCENT THE WINDOW. RELEASING THIS SW, THE ROTATION OF MOTOR IS STOPPED AND WINDOW CAN STOP AT WILL PLACE.

SWITCHING THE WINDOW LOCK SW IN "LOCK" POSITION, THE CIRCUIT IS OPENED AND STOPPED THE MOTOR ROTATION.

(FOR THE DOWN OPERATION, CURRENT FLOWS IN THE REVERSE DIRECTION BECAUSE THE TERMINALS WHERE IT FLOWS ARE CHANGED).

R

SERVICE HINTS

P2 POWER WINDOW CONTROL RELAY

3–GROUND: ALWAYS CONTINUITY

2–GROUND: APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION

5–GROUND: APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION AND MASTER SW AT **UP** POSITION

8–GROUND: APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION AND MASTER SW AT **AUTO DOWN** POSITION

9–GROUND: APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION AND MASTER SW AT **DOWN** OR **AUTO DOWN** POSITION

P 4 POWER WINDOW MASTER SW

4–GROUND: ALWAYS CONTINUITY

3–GROUND: APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION

WINDOW LOCK SW

OPEN WITH WINDOW LOCK SW AT **LOCK** POSITION

S

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
P2	21	**P4**	21	**P6**	21
P3	21	**P5**	21		21

T

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCK (RELAY BLOCK LOCATION)
1	16	R/B NO. 1 (INSTRUMENT PANEL LEFT SIDE)

U

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
3B	14	J/B NO. 3 AND COWL WIRE (INSTRUMENT PANEL LEFT SIDE)

V

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
ID1	26	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
IH1	26	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)

W

: GROUND POINTS

CODE	SEE PAGE	GROUND POINT LOCATION
IC	24	COWL LEFT

X

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESSES WITH SPLICE POINTS
I5	24	COWL WIRE

Ⓠ : Explains the system outline.

Ⓡ : Indicates values or explains the function for reference during troubleshooting.

Ⓢ : Indicates the reference page showing the position on the vehicle of the parts in the system circuit.

Example: Part “P4” (Power Window Master SW) is on page 21 of the manual.

* The letter in the code is from the first letter of the part, and the number indicates its order in parts starting with that letter.

Example: P 4

- 4 — Part is 4th in order
- P — Power Window Master SW

Ⓣ : Indicates the reference page showing the position on the vehicle of Relay Block Connectors in the system circuit.

Example: Connector “1” is described on page 16 of this manual and is installed on the left side of the instrument panel.

Ⓤ : Indicates the reference page showing the position on the vehicle of J/B and Wire Harness in the system circuit.

Example: Connector “3B” connects the Cowl Wire and J/B No. 3. It is described on page 14 of this manual, and is installed on the instrument panel left side.

Ⓥ : Indicates the reference page describing the wiring harness and wiring harness connector (the female wiring harness is shown first, followed by the male wiring harness).

Example: Connector “ID1” connects the front door RH wire (female) and cowl wire (male). It is described on page 26 of this manual, and is installed on the right side kick panel.

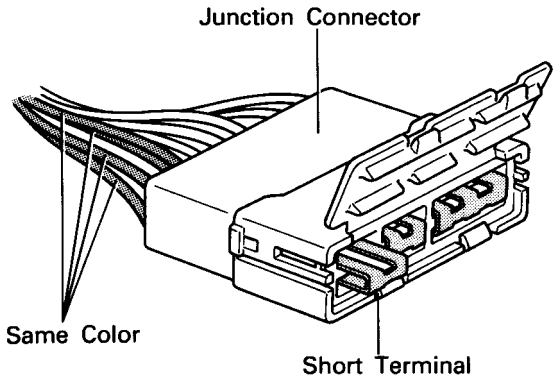
Ⓦ : Indicates the reference page showing the position of the ground points on the vehicle.

Example: Ground point “IC” is described on page 24 of this manual and is installed on the cowl left side.

Ⓧ : Indicates the reference page showing the position of the splice points on the vehicle.

Example: Splice point “I 5” is on the Cowl Wire Harness and is described on page 24 of this manual.

HINT:



Junction connector (code: J1, J2, J3, J4, J5, J6) in this manual include a short terminal which is connected to a number of wire harnesses. Always perform inspection with the short terminal installed. (When installing the wire harnesses, the harnesses can be connected to any position within the short terminal grouping. Accordingly, in other vehicles, the same position in the short terminal may be connected to a wire harness from a different part.)

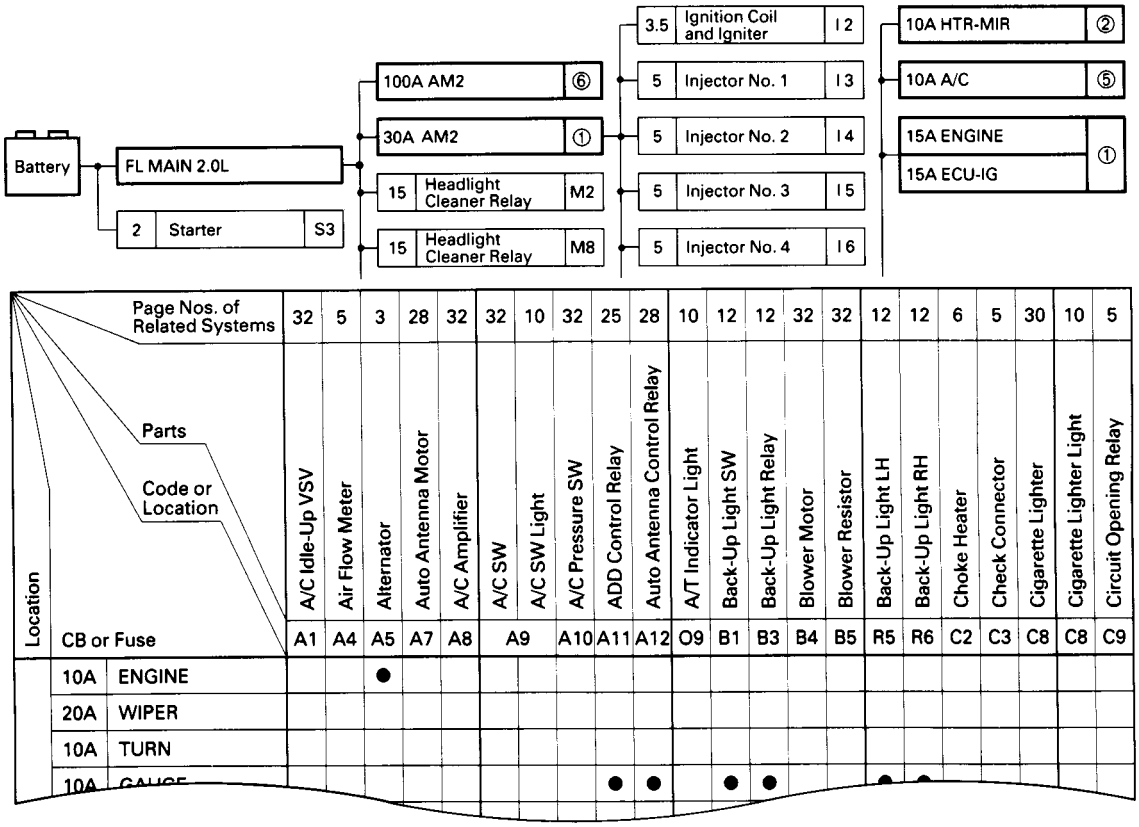
Wire harness sharing the same short terminal grouping have the same color.

The “Current Flow Chart” section, describes which parts each power source (fuses, fusible links, and circuit breakers) transmits current to. In the Power Source circuit diagram, the conditions when battery power is supplied to each system are explained. Since all System Circuit diagrams start from the power source, the power source system must be fully understood.

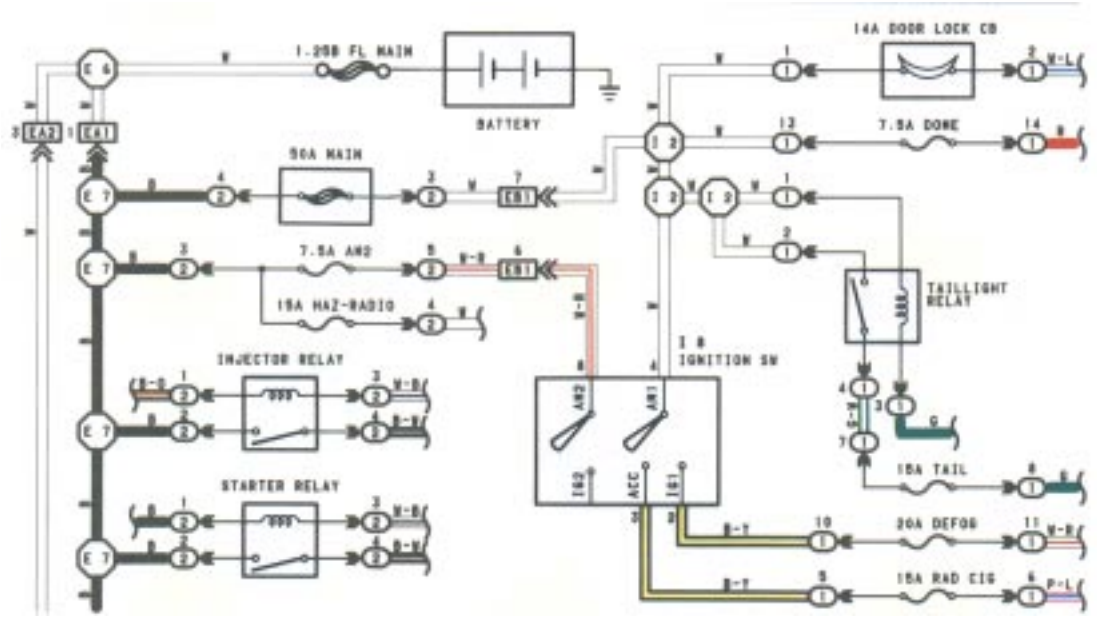
POWER SOURCE (Current Flow Chart)

The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fuse, etc.) and other parts.

The next page and following pages shown the parts to which each electrical source outputs current.

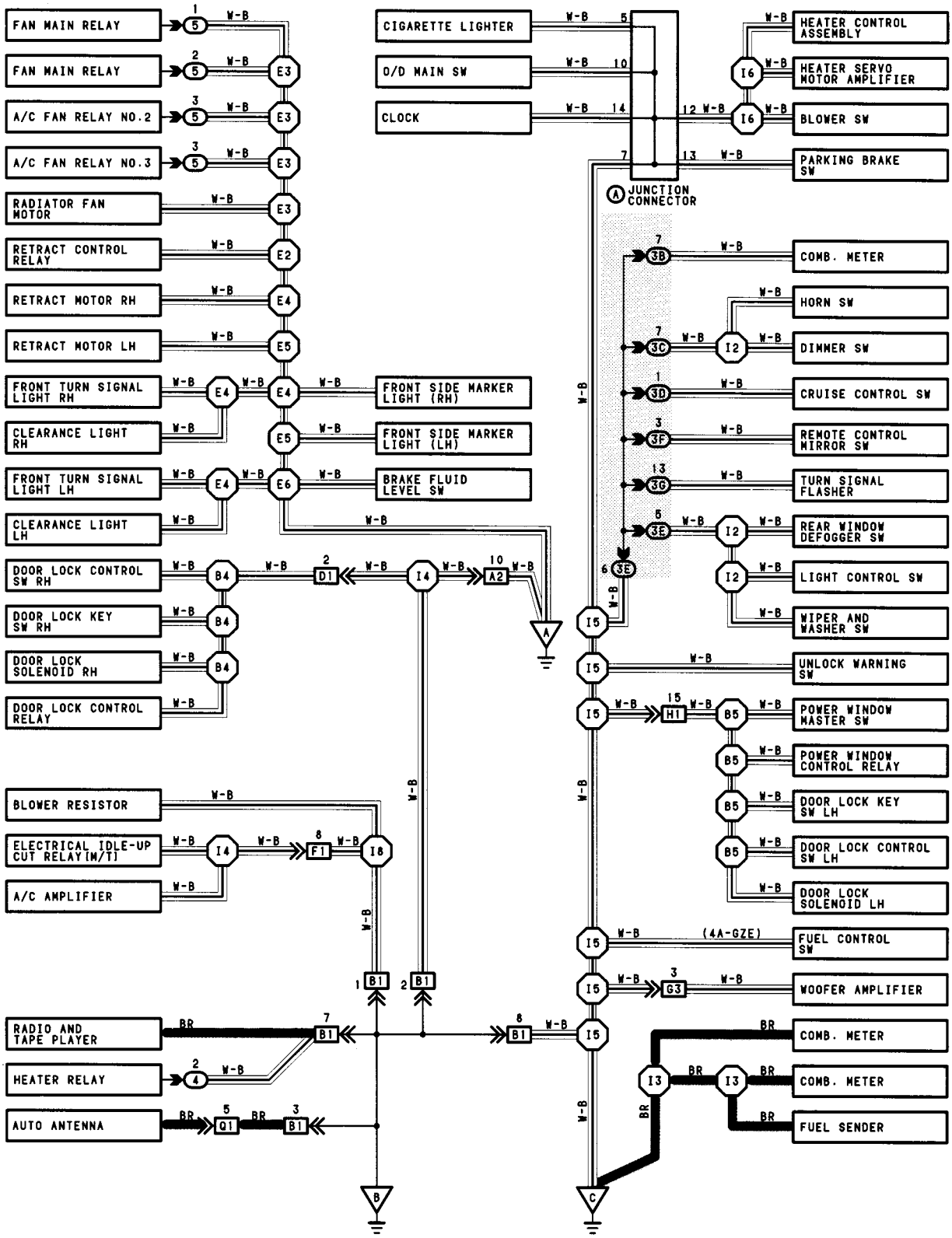


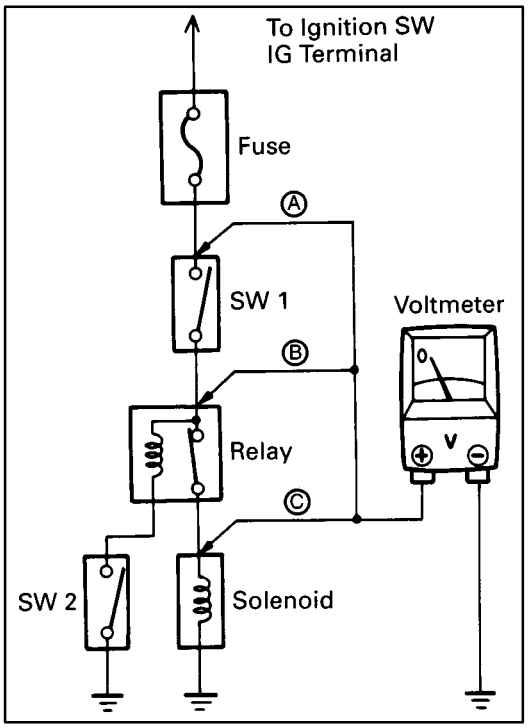
POWER SOURCE



The ground points circuit diagram shows the connections from all major parts to the respective ground points. When troubleshooting a faulty ground point, checking the system circuits which use a common ground may help you identify the problem ground quickly. The relationship between ground points (, , and shown below) can also be checked this way.

GROUND POINTS





VOLTAGE CHECK

(a) Establish conditions in which voltage is present at the check point.

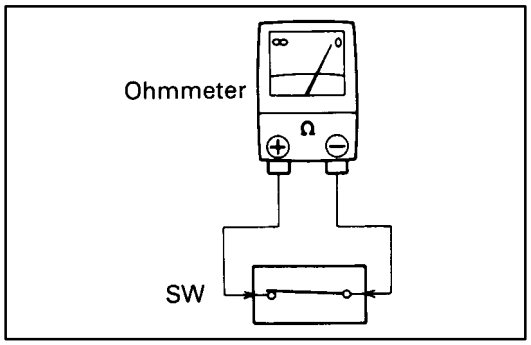
Example:

Ⓐ – Ignition SW on

Ⓑ – Ignition SW and SW 1 on

Ⓒ – Ignition SW, SW 1 and Relay on (SW 2 off)

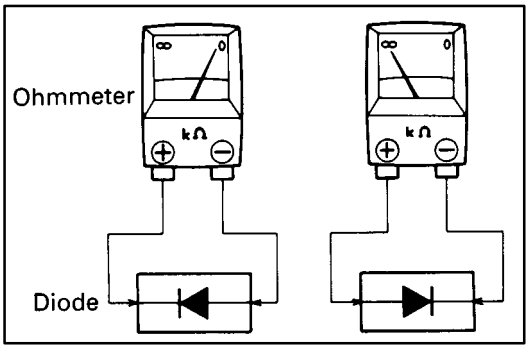
(b) Using a voltmeter, connect the negative lead to a good ground point or negative battery terminal, and the positive lead to the connector or component terminal. This check can be done with a test light instead of a voltmeter.



CONTINUITY AND RESISTANCE CHECK

(a) Disconnect the battery terminal or wire so there is no voltage between the check points.

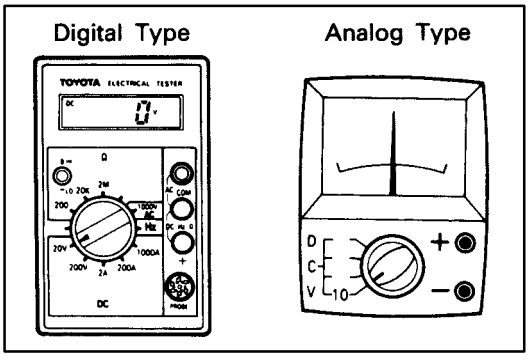
(b) Contact the two leads of an ohmmeter to each of the check points.



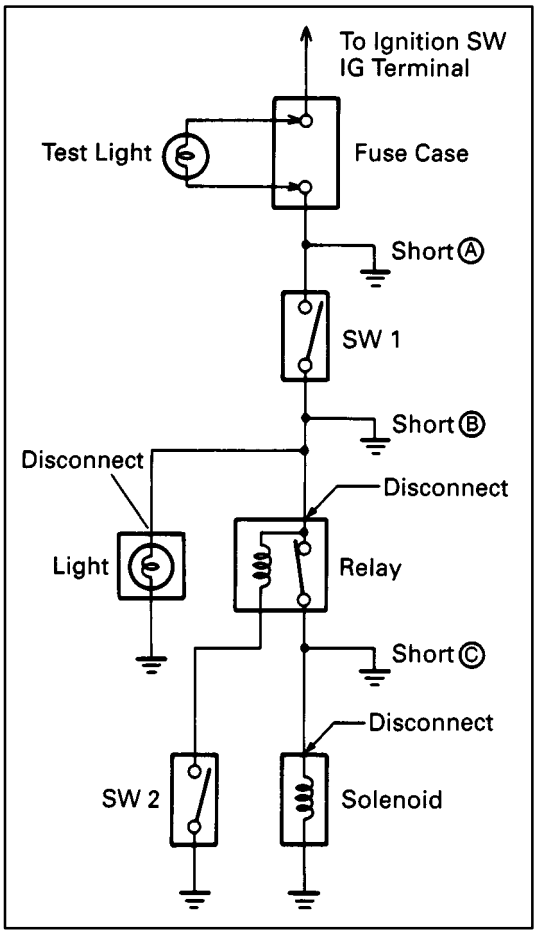
If the circuit has diodes, reverse the two leads and check again.

When contacting the negative lead to the diode positive side and the positive lead to the negative side, there should be continuity.

When contacting the two leads in reverse, there should be no continuity.



(c) Use a volt/ohmmeter with high impedance (10 kΩ/V minimum) for troubleshooting of the electrical circuit.



FINDING A SHORT CIRCUIT

(a) Remove the blown fuse and disconnect all loads of the fuse.

(b) Connect a test light in place of the fuse.

(c) Establish conditions in which the test light comes on.

Example:

Ⓐ – Ignition SW on

Ⓑ – Ignition SW and SW 1 on

Ⓒ – Ignition SW, SW 1 and Relay on (Connect the Relay) and SW 2 off (or Disconnect SW 2)

(d) Disconnect and reconnect the connectors while watching the test light.

The short lies between the connector where the test light stays lit and the connector where the light goes out.

(e) Find the exact location of the short by lightly shaking the problem wire along the body.

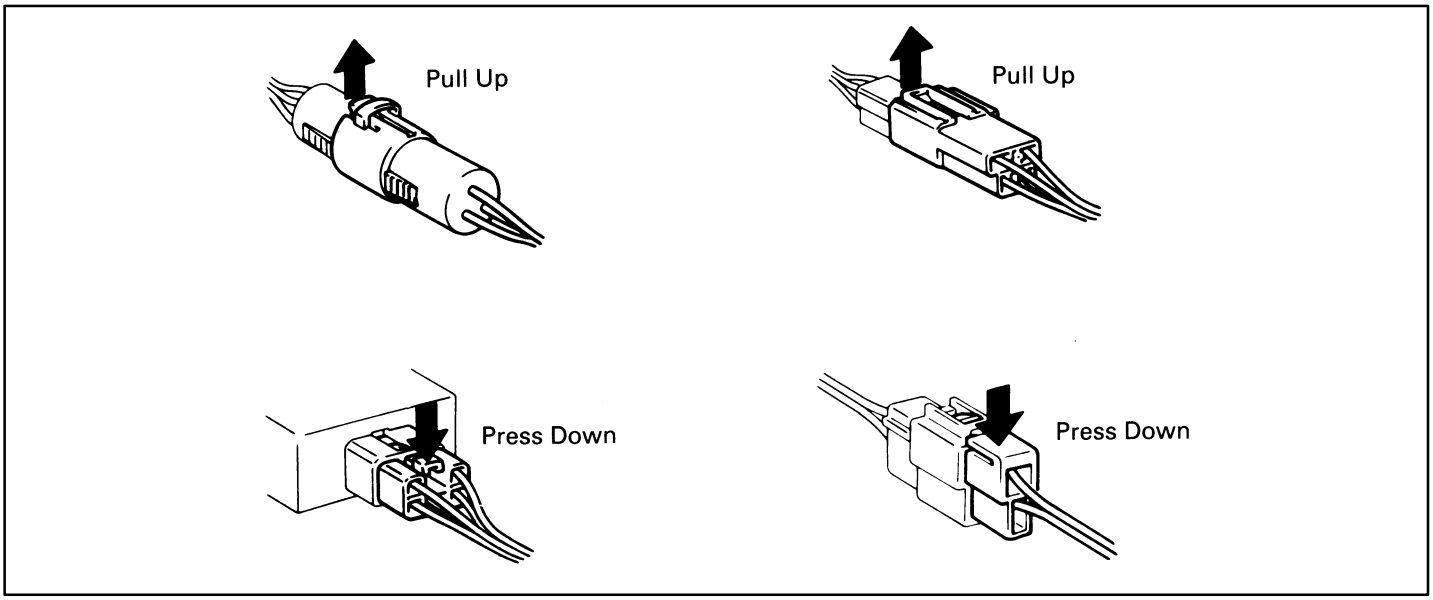
CAUTION:

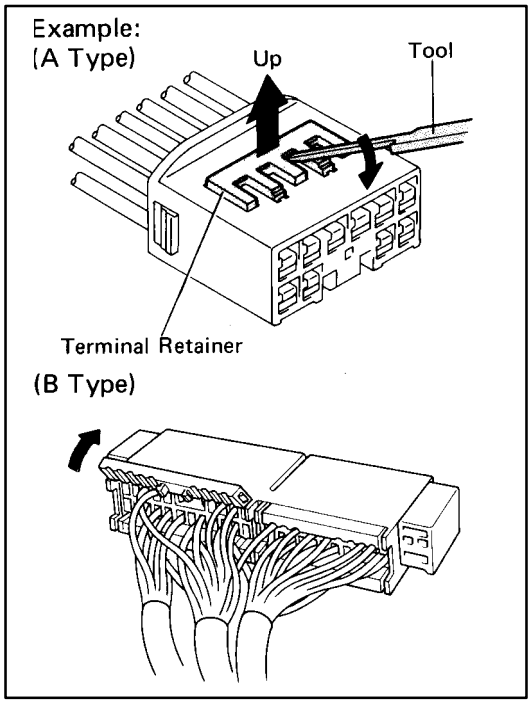
Do not open the cover or the case of the ECU unless absolutely necessary. (If the IC terminals are touched, the IC may be destroyed by static electricity.)

DISCONNECTION OF MALE AND FEMALE CONNECTORS

To pull apart the connectors, pull on the connector itself, not the wire harness.

HINT: Check to see what kind of connector you are disconnecting before pulling apart.





HOW TO REPLACEMENT FOR TERMINAL (with Terminal Retainer Type)

1. DISCONNECT CONNECTOR

2. DISCONNECT TERMINAL FROM CONNECTOR

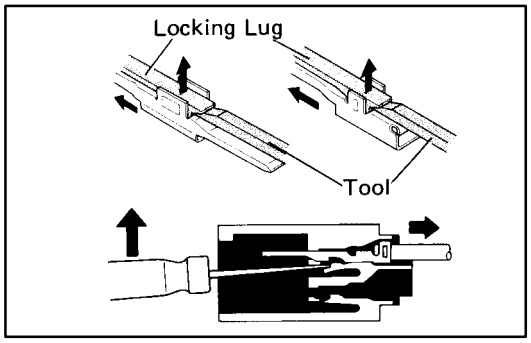
 (a) “for A type”

 Raise the terminal retainer up to the temporally lock position.

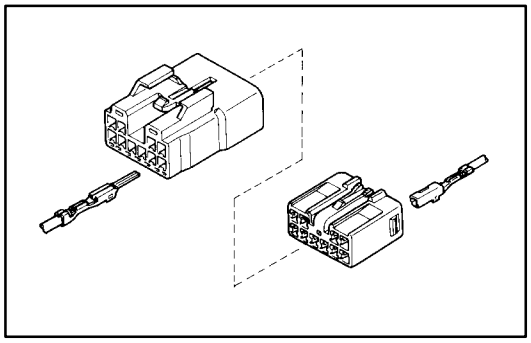
 HINT: The needle insertion position varies according to the connector’s shape (number of terminals etc.), so check the position before inserting it.

 “for B type”

 Open the terminal retainer.



 (b) Release the locking lug from terminal and pull the terminal out from rear.

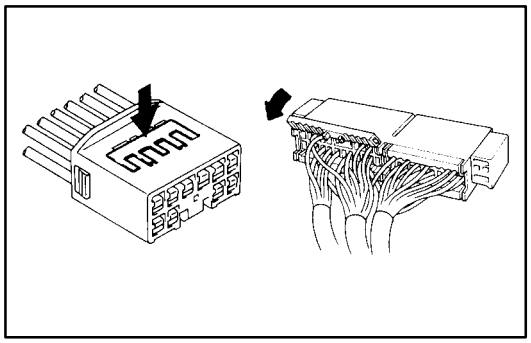


3. INSTALL TERMINAL TO CONNECTOR

 (a) Insert the terminal.

 HINT:

 1. Make sure the terminal is positioned correctly.
 2. Insert the terminal until the locking lug locks firmly.
 3. Insert the terminal with terminal retainer in the temporally lock position.



 (b) Push the terminal retainer in as the full lock position.

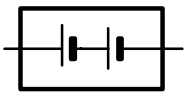
4. CONNECT CONNECTOR

ABBREVIATIONS

The following abbreviations are used in this manual.

A/C	=	Air Conditioner
ABS	=	Anti–Lock Brake System
A/T	=	Automatic Transmission
C/P	=	Coupe Type
COMB.	=	Combination
ECT	=	Electronic Controlled Transmission
ECU	=	Electronic Control Unit
EFI	=	Electronic Fuel Injection
EGR	=	Exhaust Gas Recirculation
EX.	=	Except
FL	=	Fusible Link
IIA	=	Integrated Ignition Assembly
ISC	=	Idle Speed Control
J/B	=	Junction Block
L/B	=	Liftback Type
LH	=	Left-Hand
M/T	=	Manual Transmission
O/D	=	Overdrive
R/B	=	Relay Block
RH	=	Right–Hand
SRS	=	Supplemental Restraint System
SW	=	Switch
TEMP.	=	Temperature
VSV	=	Vacuum Switching Valve
W/	=	With
W/O	=	Without

GLOSSARY OF TERMS AND SYMBOLS



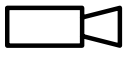
BATTERY

Stores chemical energy and converts it into electrical energy. Provides DC current for the auto's various electrical circuits.



CAPACITOR (Condenser)

A small holding unit for temporary storage of electrical voltage.



CIGARETTE LIGHTER

An electric resistance heating element.



CIRCUIT BREAKER

Basically a reusable fuse, a circuit breaker will heat and open if too much current flows through it. Some units automatically reset when cool, others must be manually reset.



DIODE

A semiconductor which allows current flow in only one direction.



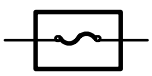
DIODE, ZENER

A diode which allows current flow in one direction but blocks reverse flow only up to a specific voltage. Above that potential, it passes the excess voltage. This acts as a simple voltage regulator.



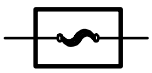
DISTRIBUTOR, IIA

Channels high–voltage current from the ignition coil to the individual spark plugs.



FUSE

A thin metal strip which burns through when too much current flows through it, thereby stopping current flow and protecting a circuit from damage.



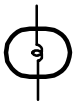
FUSIBLE LINK

A heavy–gauge wire placed in high amperage circuits which burns through on overloads, thereby protecting the circuit.



GROUND

The point at which wiring attaches to the Body, thereby providing a return path for an electrical circuit; without a ground, current cannot flow.



HEADLIGHTS

1. SINGLE FILAMENT



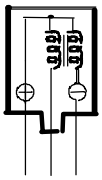
2. DOUBLE FILAMENT

Current flow causes a headlight filament to heat up and emit light. A headlight may have either a single (1) filament or a double (2) filament.



HORN

An electric device which sounds a loud audible signal.



IGNITION COIL

Converts low–voltage DC current into high–voltage ignition current for firing the spark plugs.



LIGHT

Current flow through a filament causes the filament to heat up and emit light.



LED (LIGHT EMITTING DIODE)

Upon current flow, these diodes emit light without producing the heat of a comparable light.



METER, ANALOG

Current flow activates a magnetic coil which causes a needle to move, thereby providing a relative display against a background calibration.



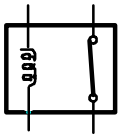
METER, DIGITAL

Current flow activates one or many LED's, LCD's, or flourescent displays, which provide a relative or digital display.



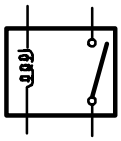
MOTOR

A power unit which converts electrical energy into mechanical energy, especially rotary motion.



RELAY

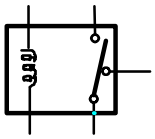
1. NORMALLY CLOSED



2. NORMALLY OPEN

Basically, an electrically operated switch which may be normally closed (1) or open (2).

Current flow through a small coil creates a magnetic field which either opens or closes an attached switch.



RELAY, DOUBLE THROW

A relay which passes current through one set of contacts or the other.



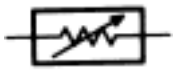
RESISTOR

An electrical component with a fixed resistance, placed in a circuit to reduce voltage to a specific value.



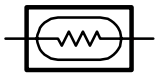
RESISTOR, TAPPED

A resistor which supplies two or more different non–adjustable resistance values.



RESISTOR, VARIABLE or RHEOSTAT

A controllable resistor with a variable rate of resistance. Also called a potentiometer or rheostat.



SENSOR (Thermistor)

A resistor which varies its resistance with temperature.



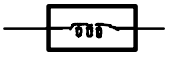
SENSOR, ANALOG SPEED

Uses magnetic impulses to open and close a switch to create a signal for activation of other components.



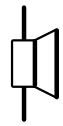
SHORT PIN

Used to provide an unbroken connection within a junction block.



SOLENOID

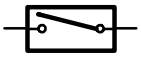
An electromagnetic coil which forms a magnetic field when current flow, to move a plunger, etc.



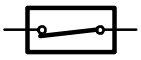
SPEAKER

An electromechanical device which creates sound waves from current flow.

SWITCH, MANUAL

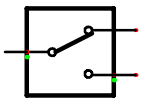


1. NORMALLY OPEN



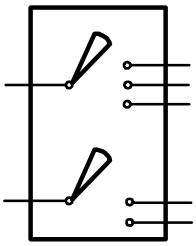
2. NORMALLY CLOSED

Opens and closes circuits, thereby stopping (1) or allowing (2) current flow.



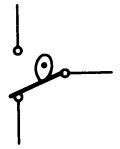
SWITCH, DOUBLE THROW

A switch which continuously passes current through one set of contacts or the other.



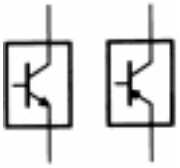
SWITCH, IGNITION

A key operated switch with several positions which allow various circuits. Particularly the primary ignition circuit, to become operational.



SWITCH, WIPER PARK

Automatically returns wipers to the stop position when the wiper switch is turned off.



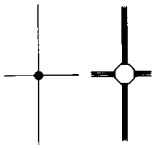
TRANSISTOR

A solidstate device typically used as an electronic relay; stops or passes current depending on the applied voltage at “base.”

WIRES



(1) NOT CONNECTED

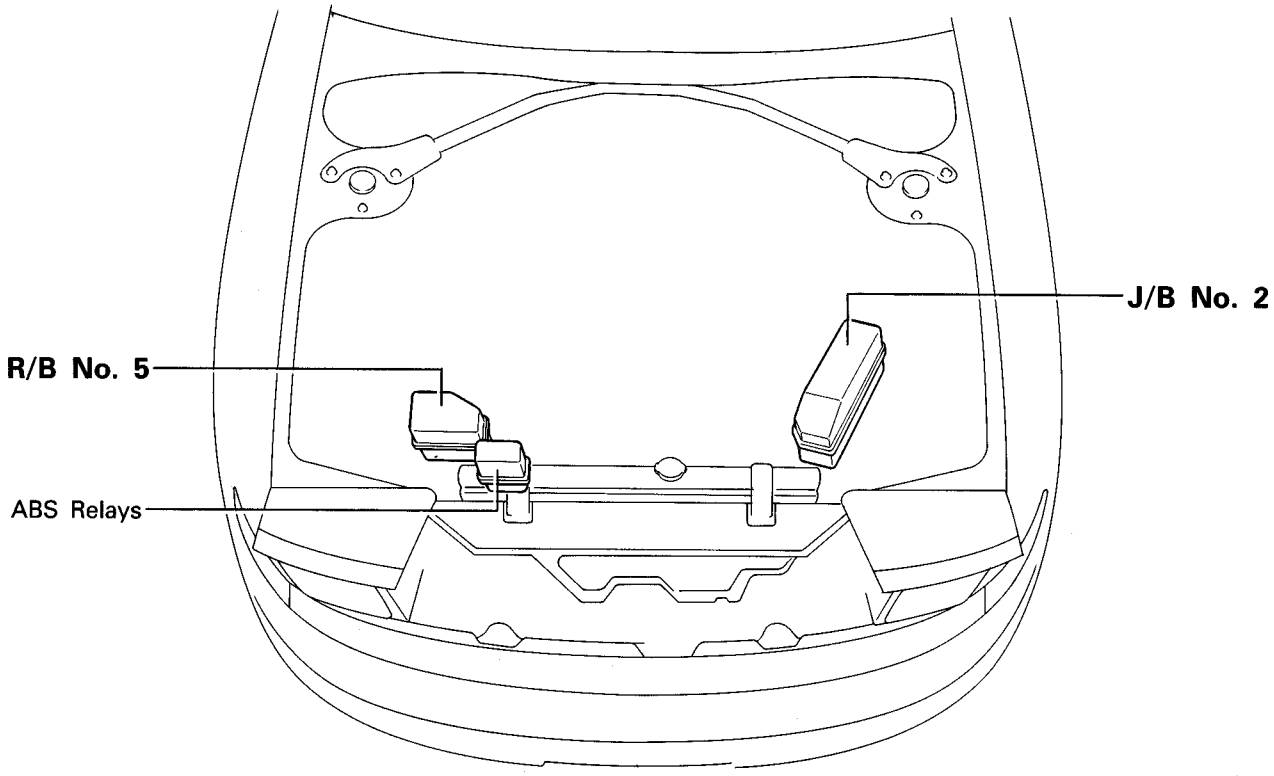


(2) SPLICED

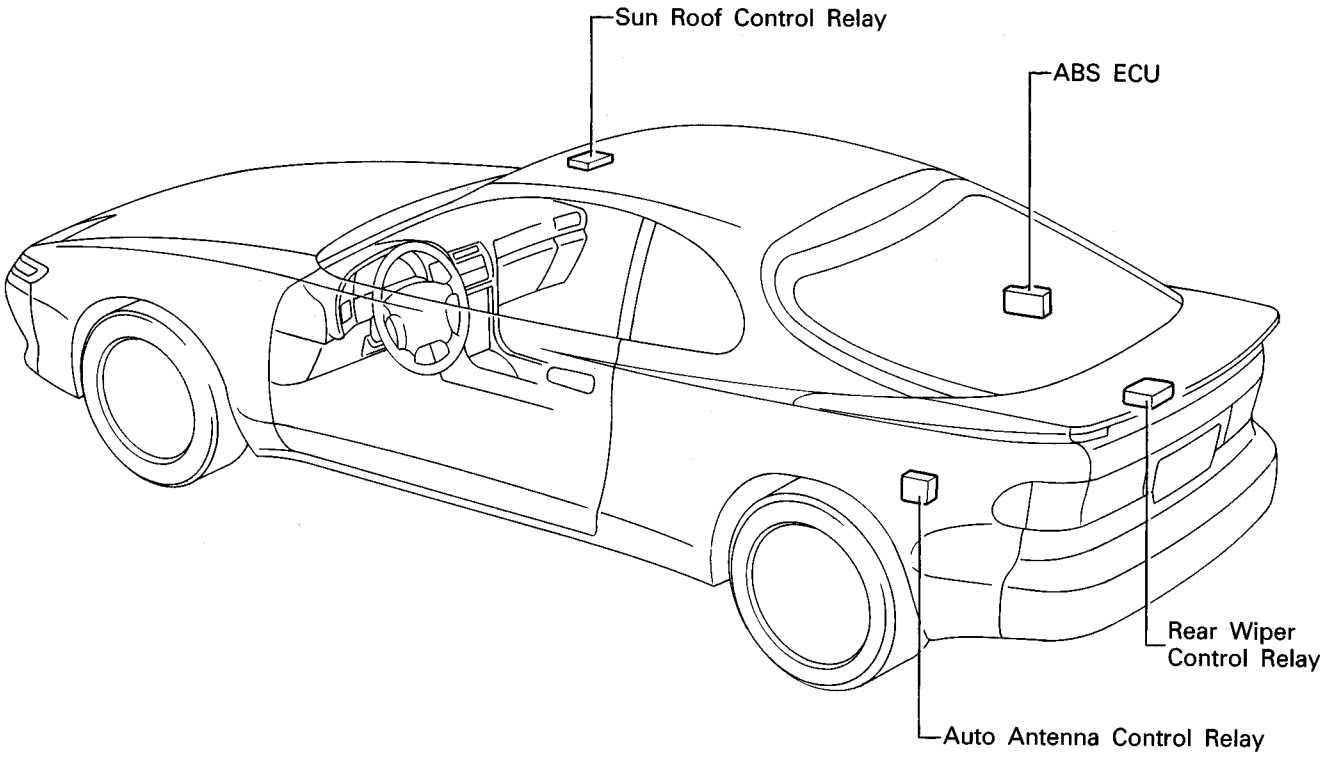
Wires are always drawn as straight lines on wiring diagrams. Crossed wired (1) without a black dot at the junction are not joined; crossed wires (2) with a black dot or octagonal (◯) mark at the junction are spliced (joined) connections.

RELAY LOCATIONS

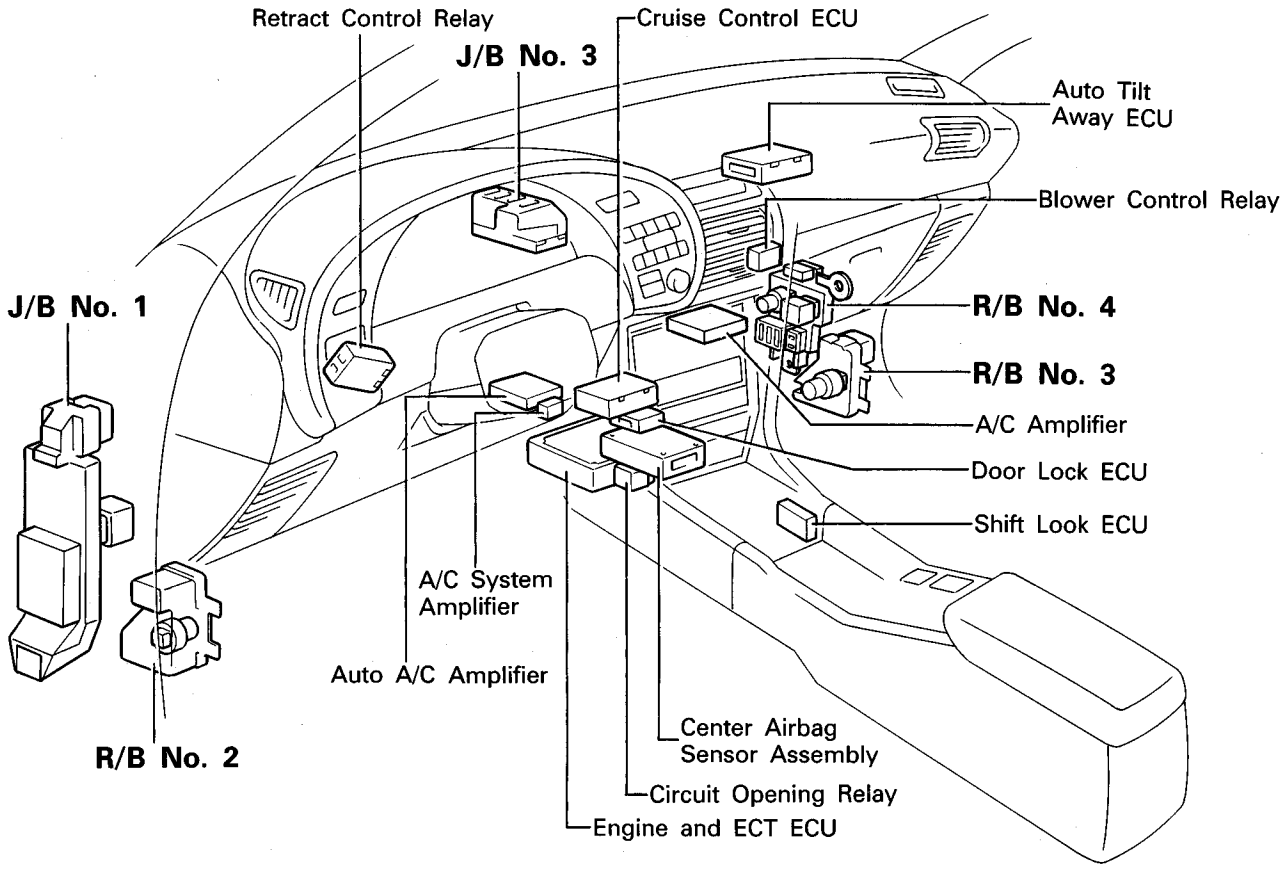
[Engine Compartment]



[Body]

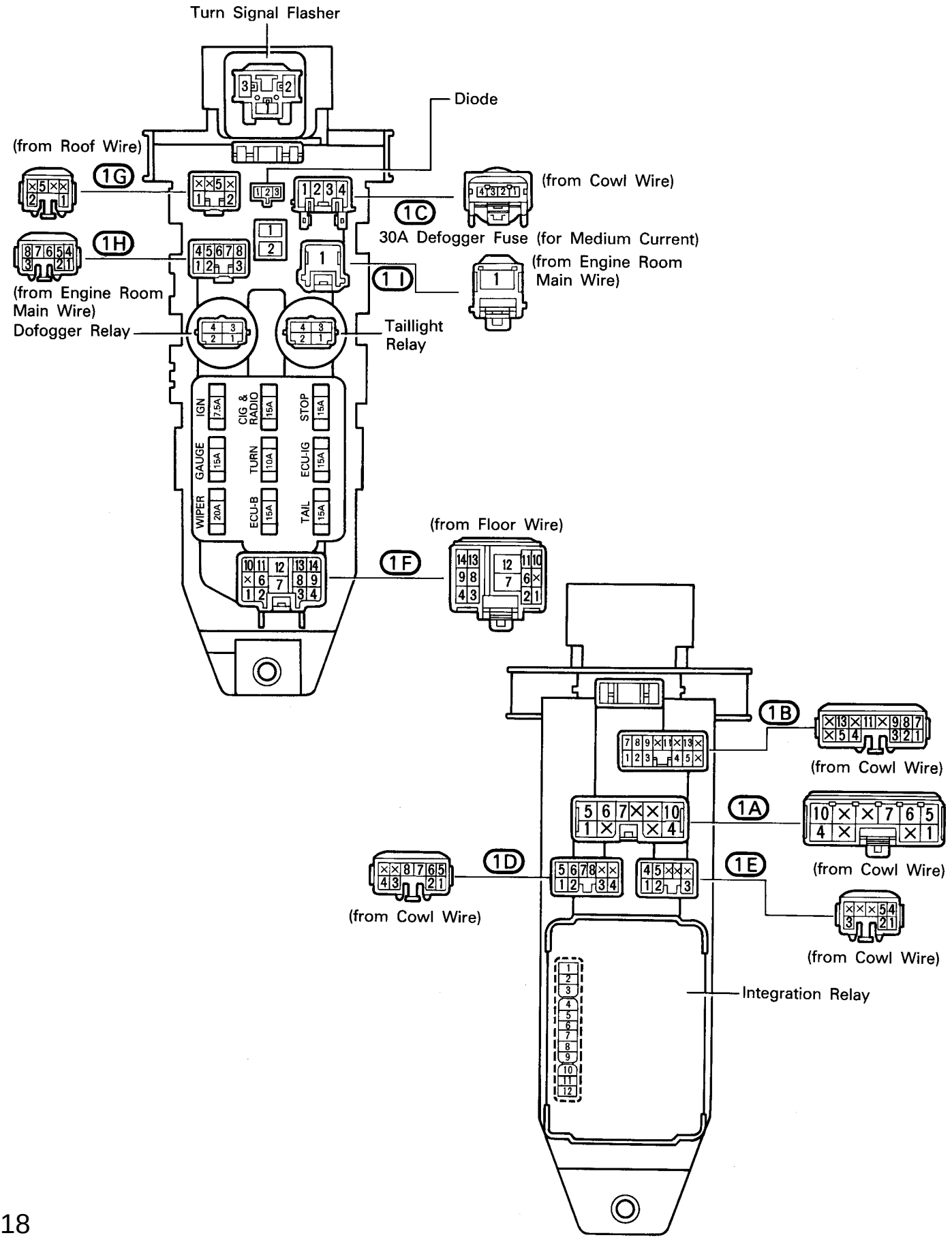


[Instrument Panel]

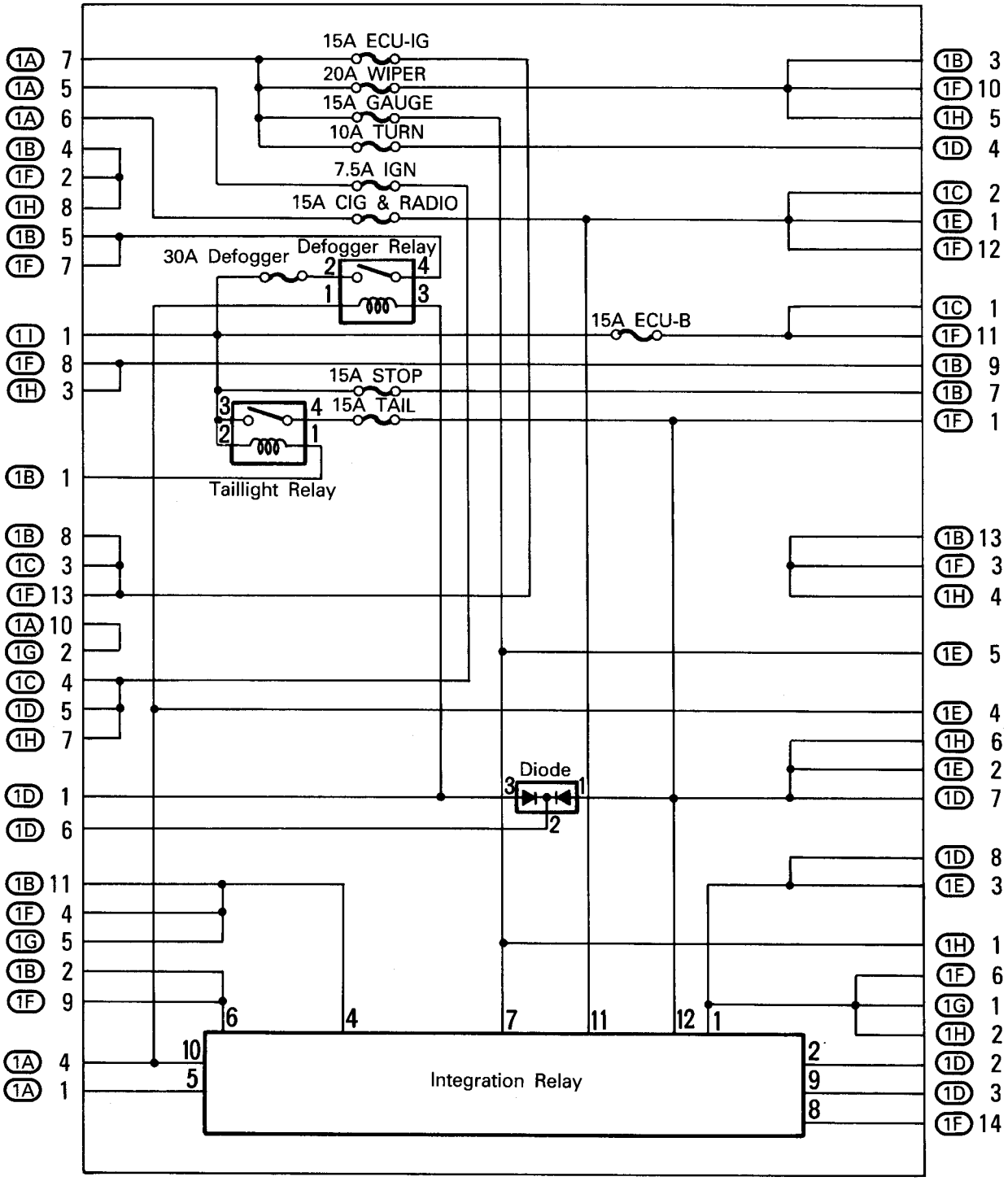


RELAY LOCATIONS

: J/B No. 1	Left Kick Panel	(See Page 17)

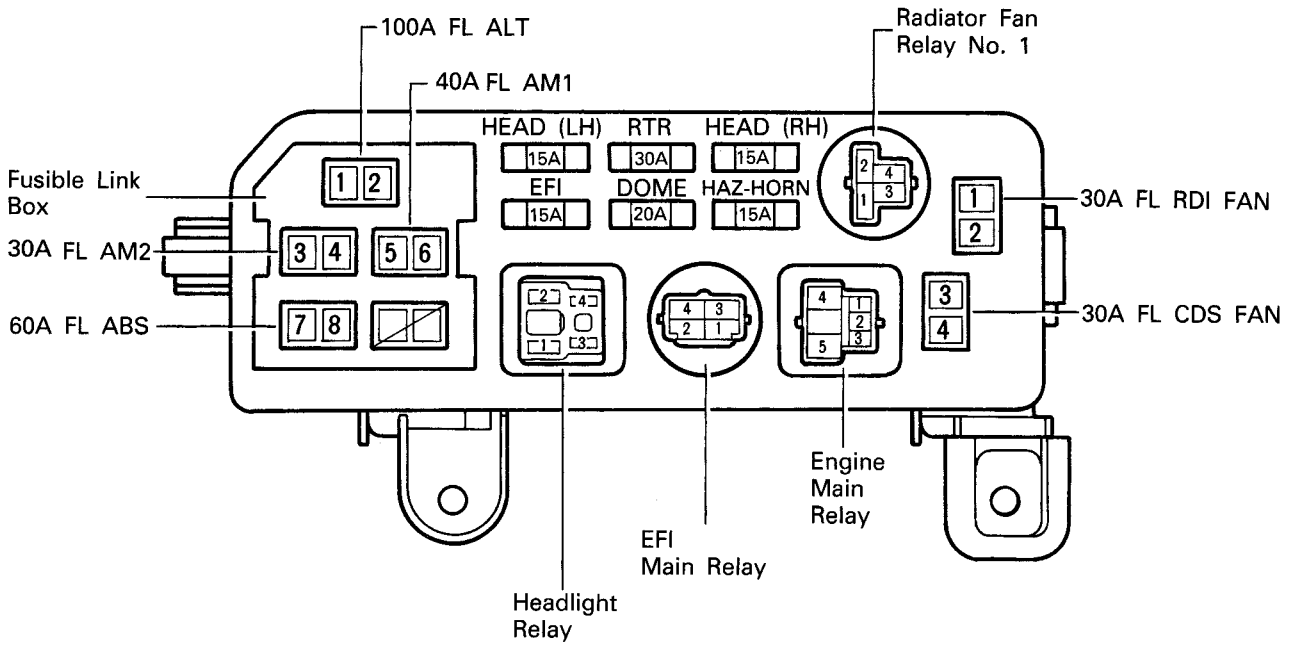


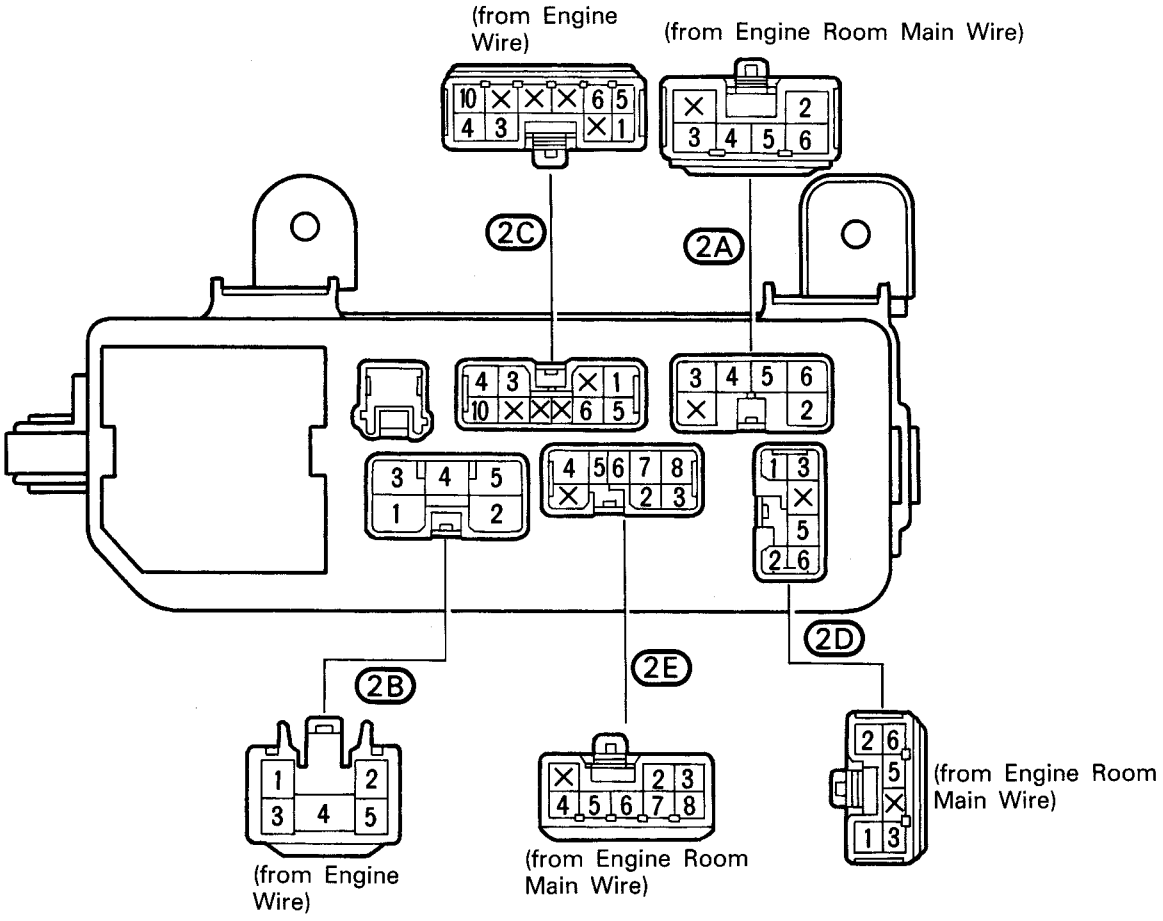
[J/B No. 1 Inner Circuit]



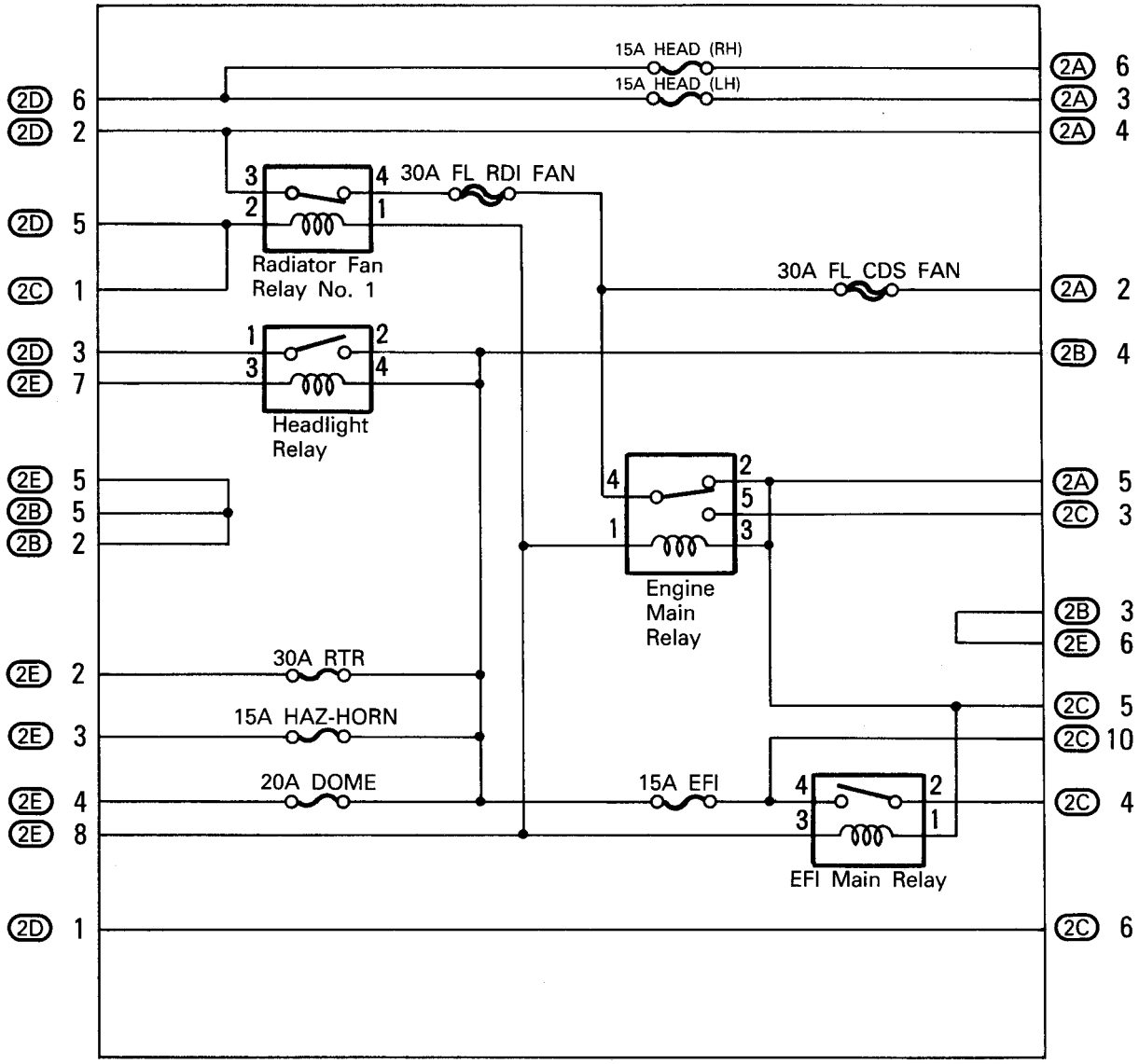
RELAY LOCATIONS

: J/B No. 2	Near the Battery	(See Page 16)



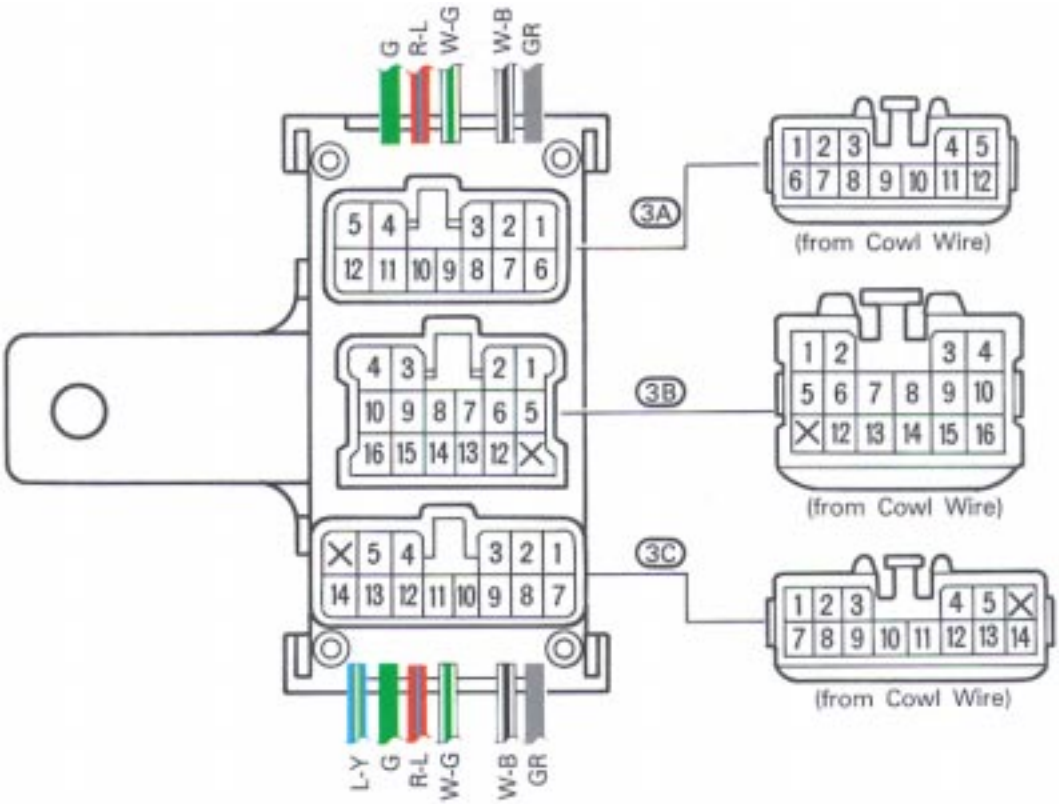


[J/B No. 2 Inner Circuit]

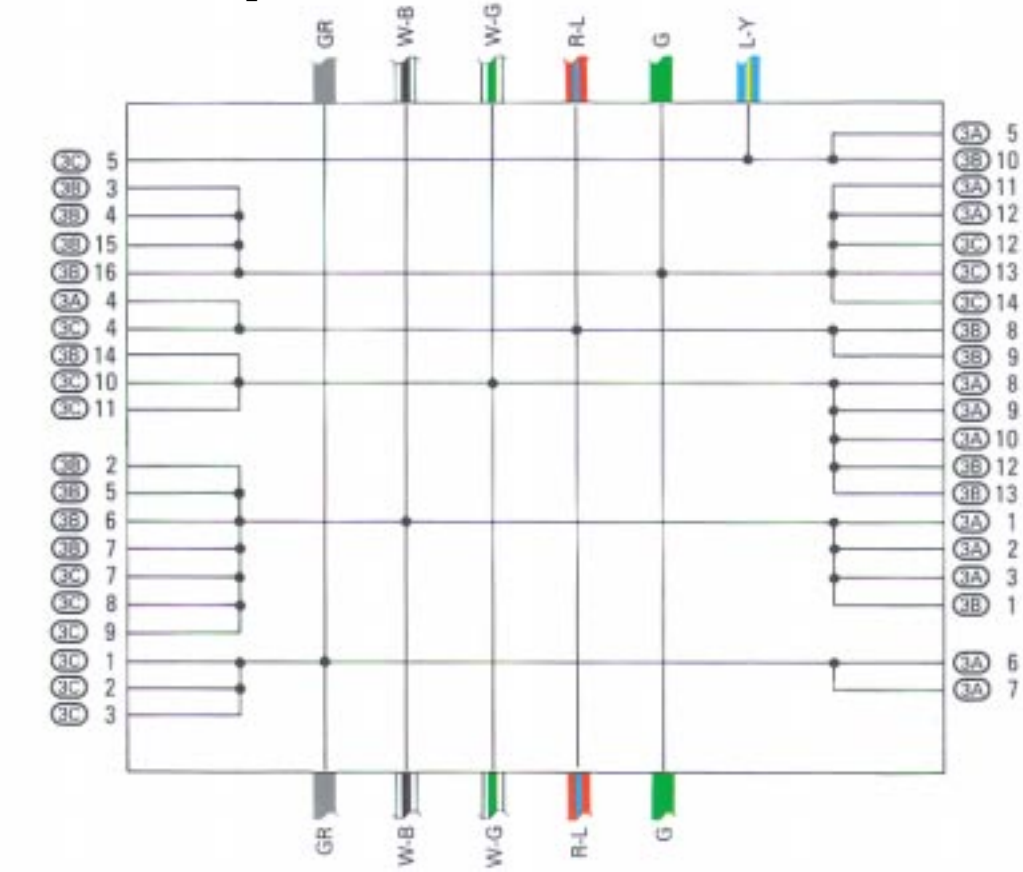


RELAY LOCATIONS

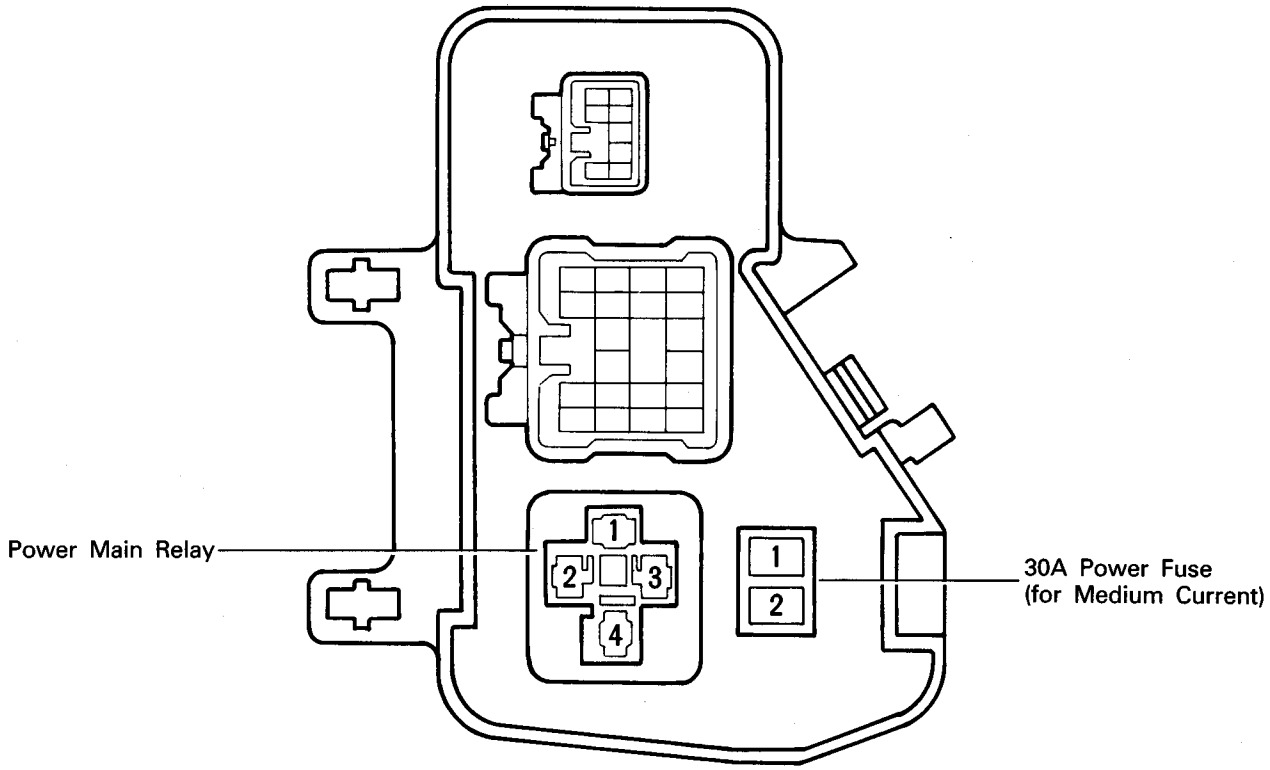
: J/B No. 3	Behind Combination Meter (See Page 17)



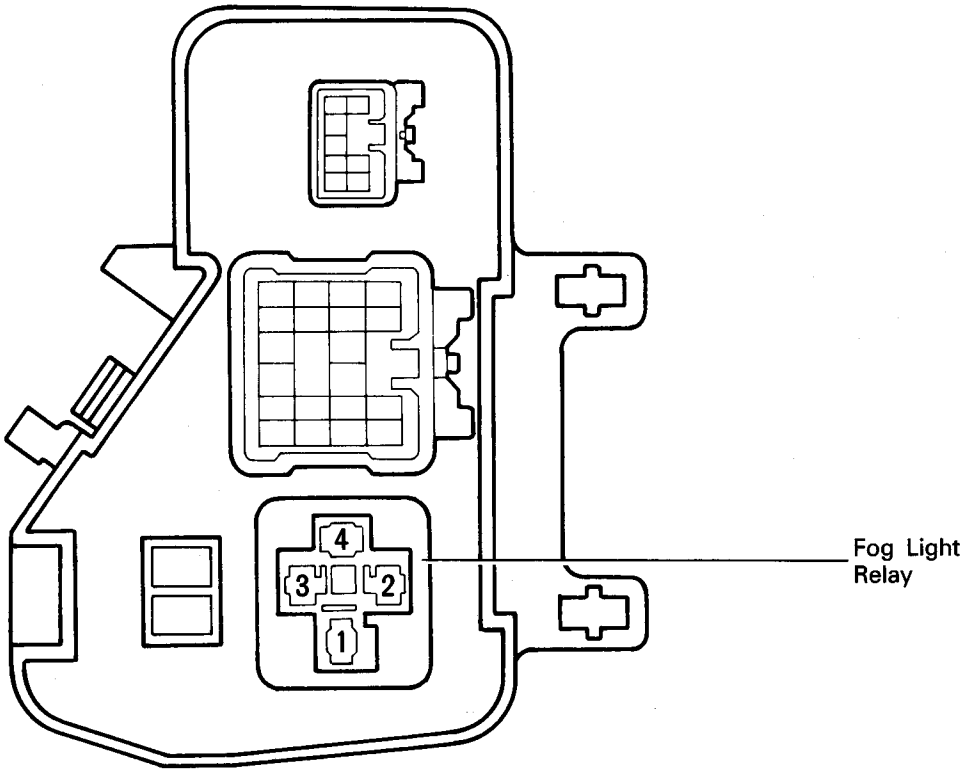
[J/B No. 3 Inner Circuit]



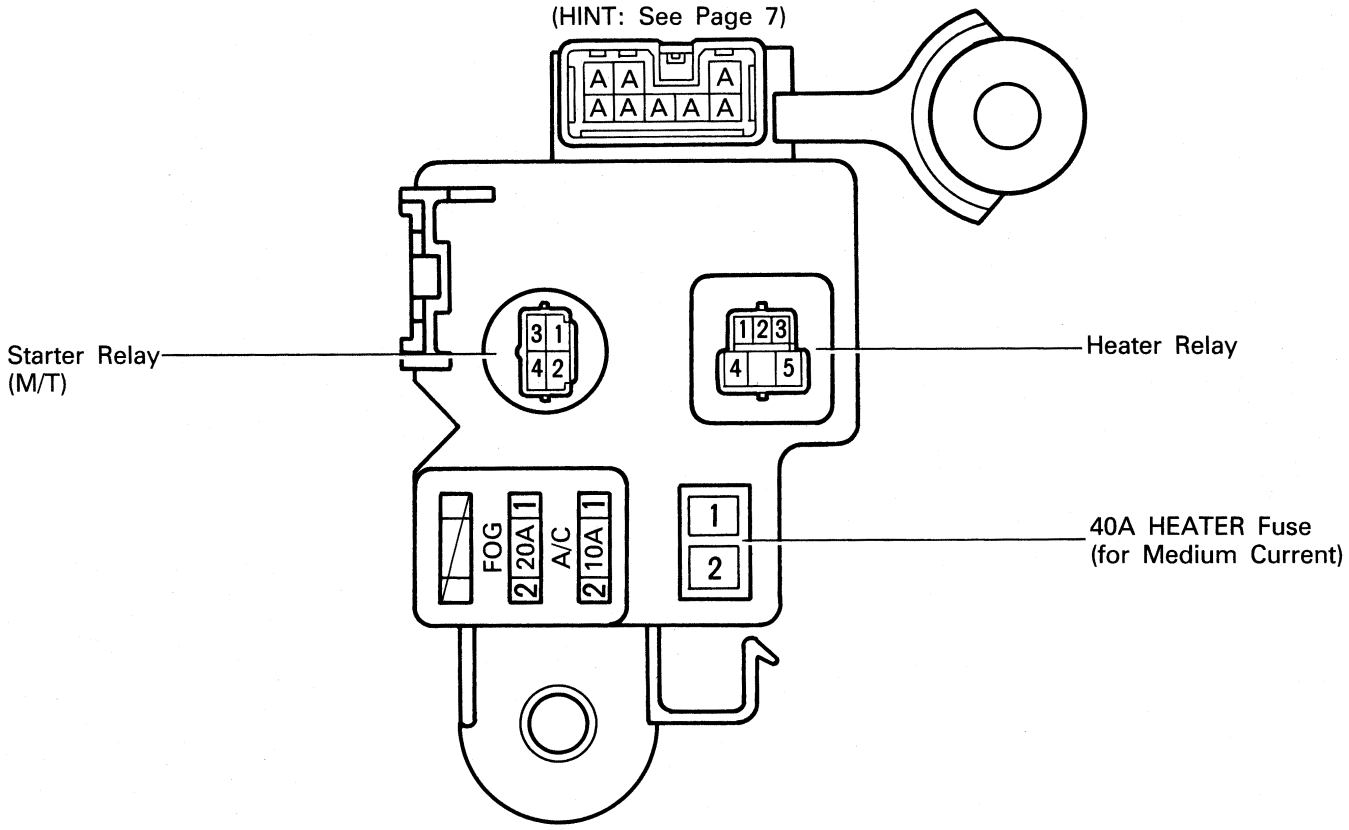
② : R/B No. 2	Left Kick Panel (See Page 17)



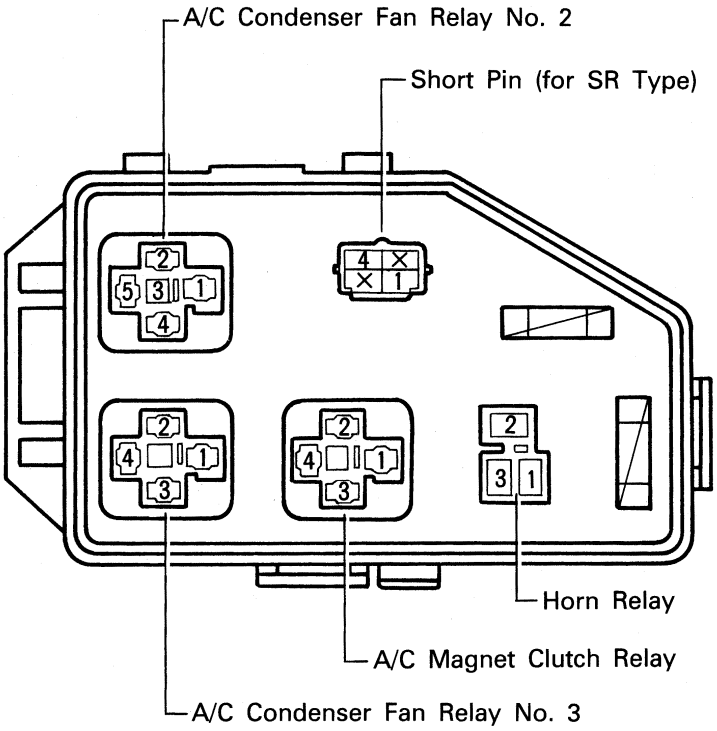
③ : R/B No. 3	Right Kick Panel (See Page 17)



④ : R/B No. 4	Right Kick Panel	(See Page 17)

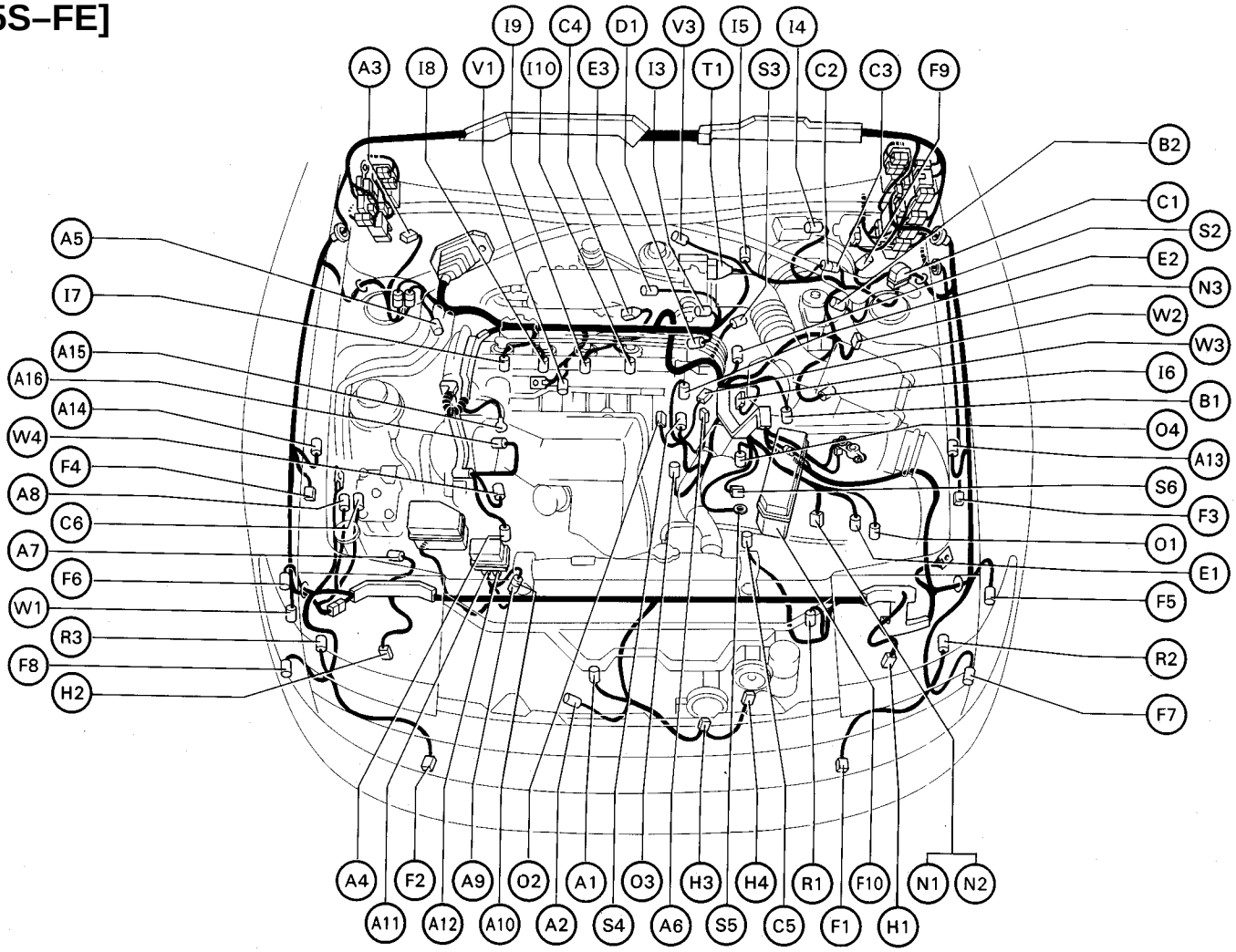


⑤ : R/B No. 5	Engine Compartment Front Right	(See Page 16)



Position of Parts in Engine Compartment

[5S–FE]



A 1 A/C Ambient Temp. Sensor
A 2 A/C Condenser Fan Motor
A 3 A/C Idle–Up VSV
A 4 A/C Magnet Clutch
A 5 A/C Pressure SW
A 6 A/C Water Temp. SW
A 7 ABS Actuator
A 8 ABS Actuator
A 9 ABS Check Connector
A 10 ABS Check Connector
A 11 ABS Relay
A 12 ABS Relay
A 13 ABS Speed Sensor Front LH
A 14 ABS Speed Sensor Front RH
A 15 Alternator
A 16 Alternator

B 1 Back–Up Light SW (M/T)
B 2 Brake Fluid level SW

C 1 Check Connector
C 2 Check Connector (for Fan Check)
C 3 Check Connector (for Fan Check)
C 4 Cold Start Injector
C 5 Cruise Control Actuator (w/ ABS)
C 6 Cruise Control Actuator (w/o ABS)

D 1 Distributor

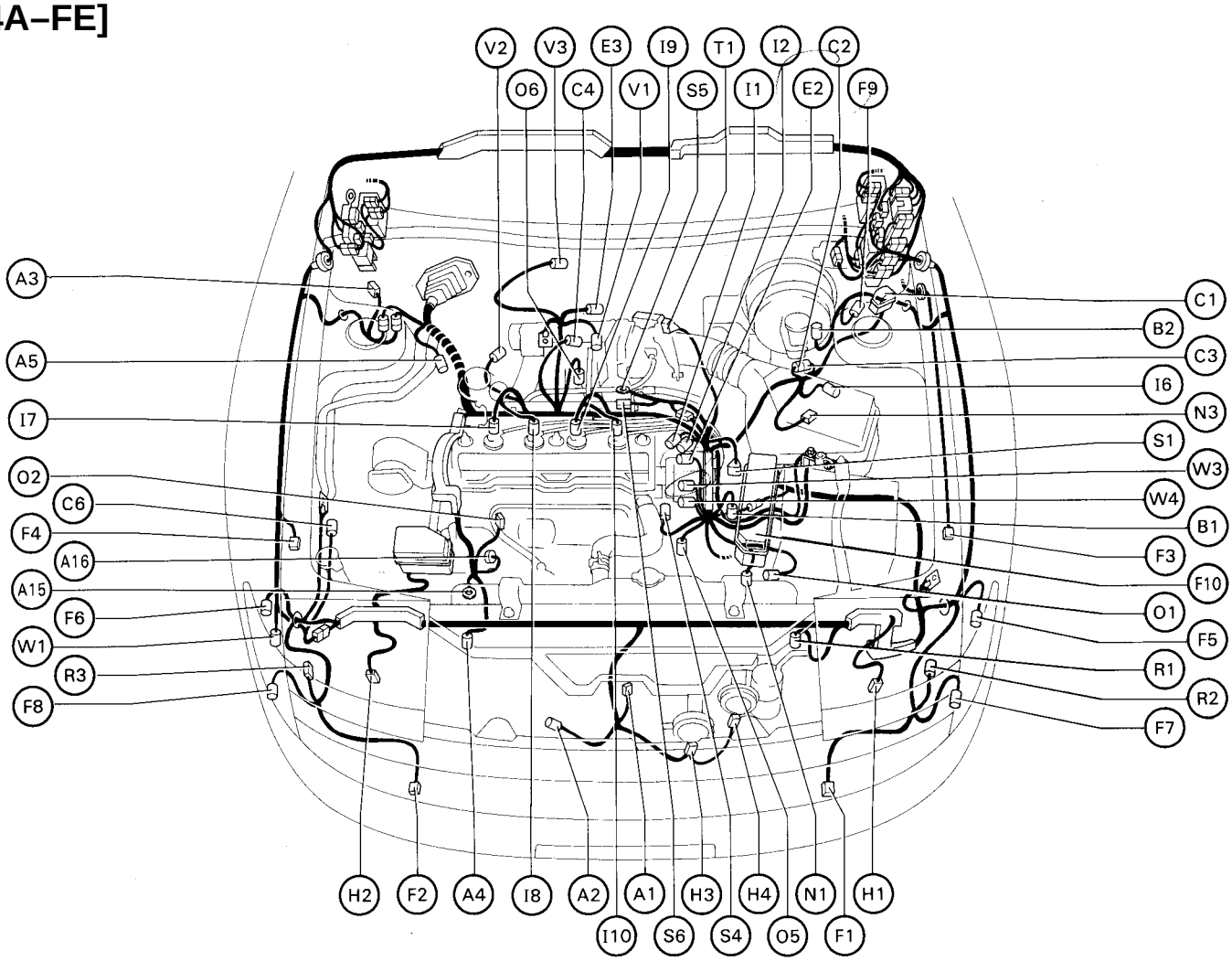
E 1 ECT Solenoid
E 2 EFI Water Temp. Sensor
E 3 EGR Gas Temp. Sensor (for California)

F 1 Fog Light LH
F 2 Fog Light RH
F 3 Front Airbag Sensor LH
F 4 Front Airbag Sensor RH
F 5 Front Side Marker Light LH
F 6 Front Side Marker Light RH
F 7 Front Turn Signal Light and Clearance Light LH
F 8 Front Turn Signal Light and Clearance Light RH
F 9 Front Wiper Motor
F 10 Fusible Link Box

H 1 Headlight LH
H 2 Headlight RH
H 3 Horn LH
H 4 Horn RH

Position of Parts in Engine Compartment

[4A–FE]



I 1 IIA
I 2 IIA
I 3 ISC Valve
I 4 Igniter
I 5 Ignition Coil
I 6 In–Air Temp. Sensor
I 7 Injector No.1
I 8 Injector No.2
I 9 Injector No.3
I 10 Injector No.4

N 1 Neutral Start SW and Back–Up Light SW (w/o ECT of A/T)
N 2 Neutral Start SW, Back–Up Light SW and A/T Indicator (w/ ECT of A/T)
N 3 Noise Filter (for Ignition System)

O 1 O/D Solenoid
O 2 Oil Pressure SW
O 3 Oxygen Sensor (Main)
O 4 Oxygen Sensor (Sub)
O 5 Oxygen Sensor (for California)
O 6 Oxygen Sensor (for Ex. California)

R 1 Radiator Fan Motor
R 2 Retract Motor LH
R 3 Retract Motor RH

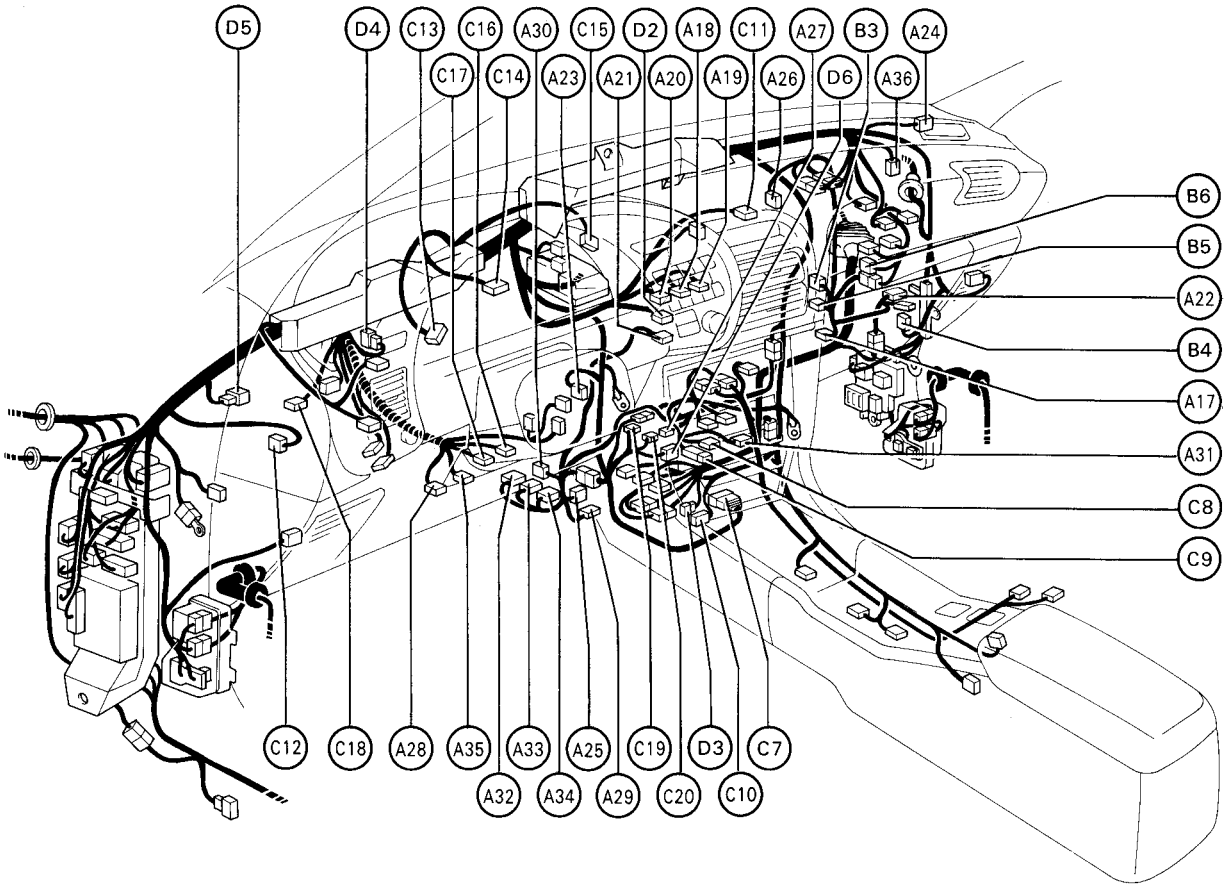
S 1 Speed Sensor (for Cruise Control System)
S 2 Speed Sensor (for ECT)
S 3 Speed Sensor (for Cruise Control System)
S 4 Start injector Time SW
S 5 Starter
S 6 Starter

T 1 Throttle Position Sensor

V 1 VSV (for EGR System)
V 2 VSV (for Electrical Idle–Up System)
V 3 Vacuum Sensor

W 1 Washer Motor
W 2 Water Temp. SW (for O/D System)
W 3 Water Temp. Sender
W 4 Water Temp. SW (for Fans Control)

Position of Parts in Instrument Panel



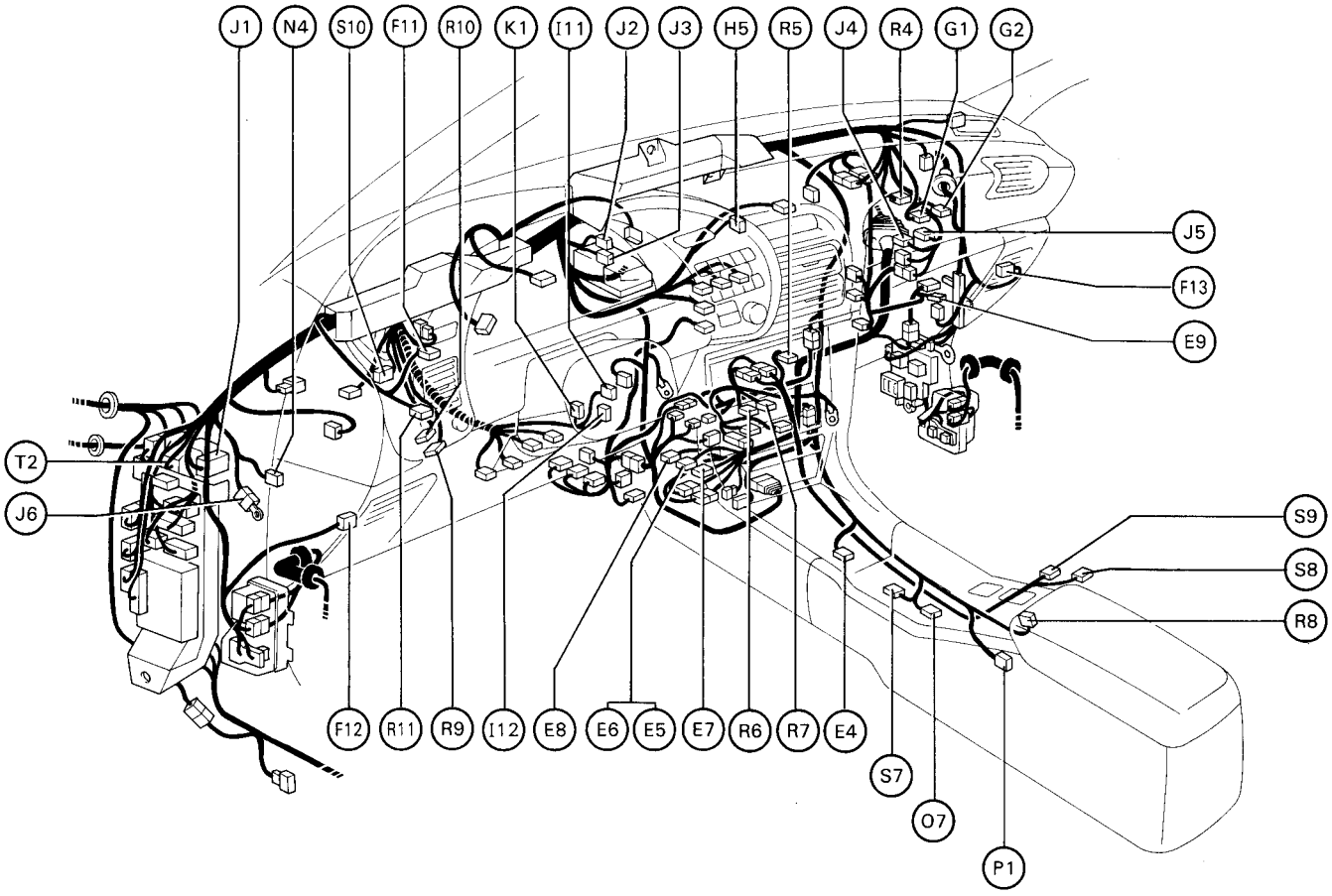
A 17 A/C Amplifier
A 18 A/C Control Assembly
A 19 A/C Control Assembly
A 20 A/C Control Assembly
A 21 A/C Control Assembly
A 22 A/C Power Transistor
A 23 A/C Room Temp. Sensor
A 24 A/C Solar Sensor
A 25 A/C System Amplifier
A 26 A/C Thermistor
A 27 A/C Water Temp. Sensor
A 28 Airbag Squib
A 29 Air Mix Control Servo Motor
A 30 Air Vent Mode Control Servo Motor
A 31 Ashtray
A 32 Auto A/C Amplifier
A 33 Auto A/C Amplifier
A 34 Auto A/C Amplifier
A 35 Auto Tilt Away Actuator
A 36 Auto Tilt Away ECU

B 3 Blower Control Relay
B 4 Blower Motor
B 5 Blower Resistor
B 6 Blower Resistor

C 7 Center Airbag Sensor Assembly
C 8 Cigarette Lighter
C 9 Cigarette Lighter Illumination
C 10 Circuit Opening Relay
C 11 Clock
C 12 Clutch Start SW
C 13 Combination Meter
C 14 Combination Meter
C 15 Combination Meter
C 16 Combination SW
C 17 Combination SW
C 18 Cruise Control Clutch SW
C 19 Cruise Control ECU
C 20 Cruise Control ECU

D 2 Defogger SW
D 3 Diode (for O/D System)
D 4 Diode (for Cruise Control System)
D 5 Diode (for Key Off)
D 6 Door Lock ECU

Position of Parts in Instrument Panel



E 4 ECT Pattern Select SW
E 5 Engine ECU (4A–FE)
E 6 Engine and ECT ECU (5S–FE)
E 7 Engine and ECT ECU (5S–FE)
E 8 Engine and ECT ECU
E 9 Extra High Speed Relay

F 11 Fog Light SW
F 12 Front Speaker LH
F 13 Front Speaker RH

G 1 Glove Box Light
G 2 Glove Box Light SW

H 5 Hazard SW

I 11 Ignition Key Cylinder Light
I 12 Ignition SW and Unlock Warning SW

J 1 Junction Connector
J 2 Junction Connector
J 3 Junction Connector
J 4 Junction Connector
J 5 Junction Connector
J 6 Junction Connector (for Earth)

K 1 Key Inter Lock Solenoid

N 4 Noise Filter (for Defogger System)

O 7 O/D Main SW

P 1 Parking Brake SW

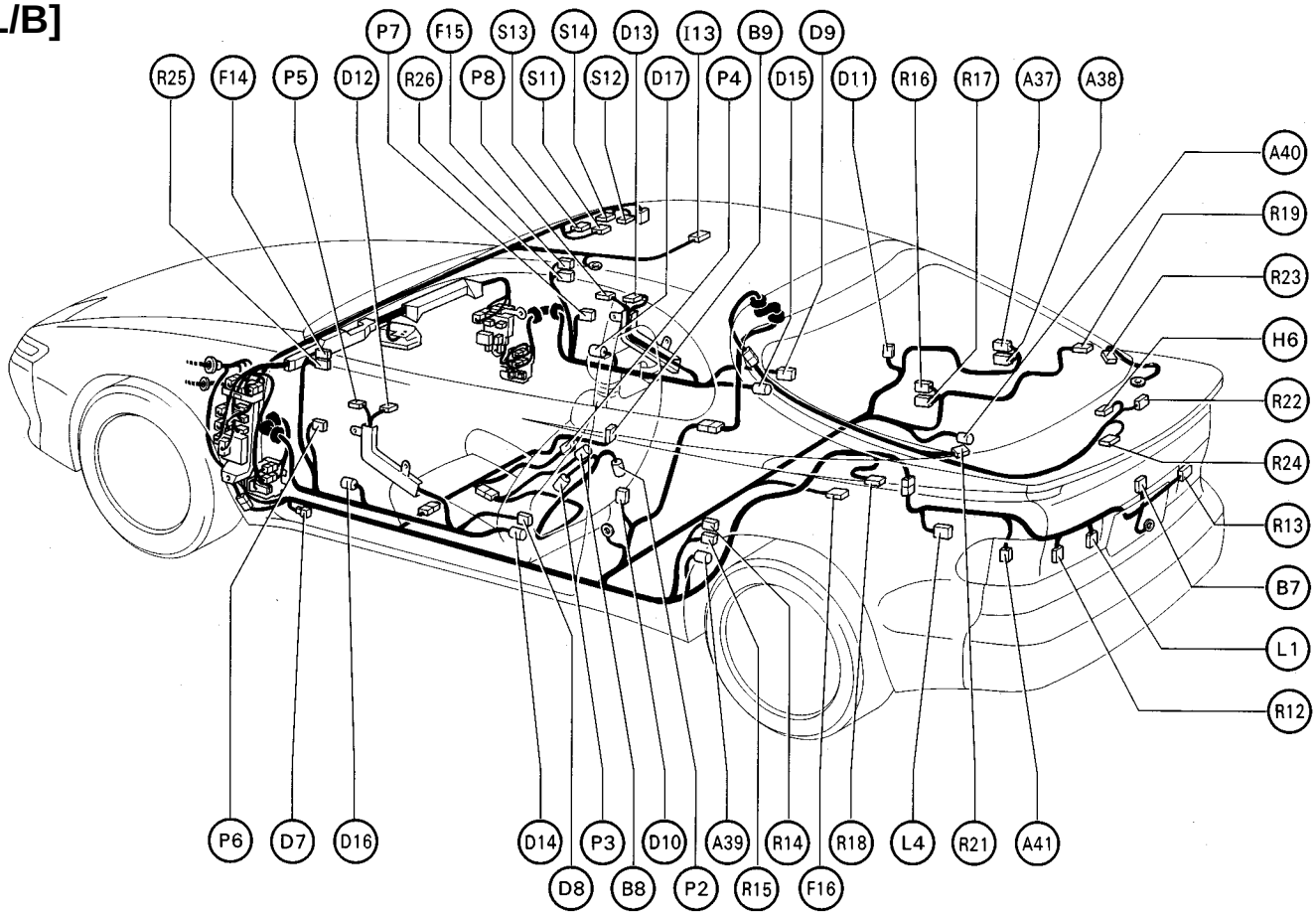
R 4 RECIRC/FRESH Control Servo Motor
R 5 Radio and Player (w/ CD Player)
R 6 Radio and Player (w/o CD Player)
R 7 Radio and Player (w/o CD Player)
R 8 Remote Control Mirror SW
R 9 Retract Control Relay
R 10 Retract Control Relay (for CANADA)
R 11 Rheostat

S 7 Shift Lock ECU
S 8 Stereo Component Amplifier (w/ CD Player)
S 9 Stereo Component Amplifier (w/ CD Player)
S 10 Stop Light SW (w/o Cruise Control System) or Stop Light and Cruise Control Stop SW

T 2 Turn Signal Flasher

Position of Parts in Body

[L/B]



A 37 ABS ECU
A 38 ABS ECU
A 39 ABS Speed Sensor Rear LH
A 40 ABS Speed Sensor Rear RH
A 41 Auto Antenna Control Relay and Motor

B 7 Back Door Courtesy SW
B 8 Buckle SW (w/ Power Seat)
B 9 Buckle SW (w/o Power Seat)

D 7 Diode (for Interior Light System)
D 8 Door Courtesy Light LH
D 9 Door Courtesy Light RH
D 10 Door Courtesy SW LH
D 11 Door Courtesy SW RH
D 12 Door Lock Control SW LH
D 13 Door Lock Control SW RH
D 14 Door Lock Motor LH and, Key Lock and Unlock SW LH
D 15 Door Lock Motor RH and, Key Lock ans Unlock SW RH
D 16 Door Speaker LH
D 17 Door Speaker RH

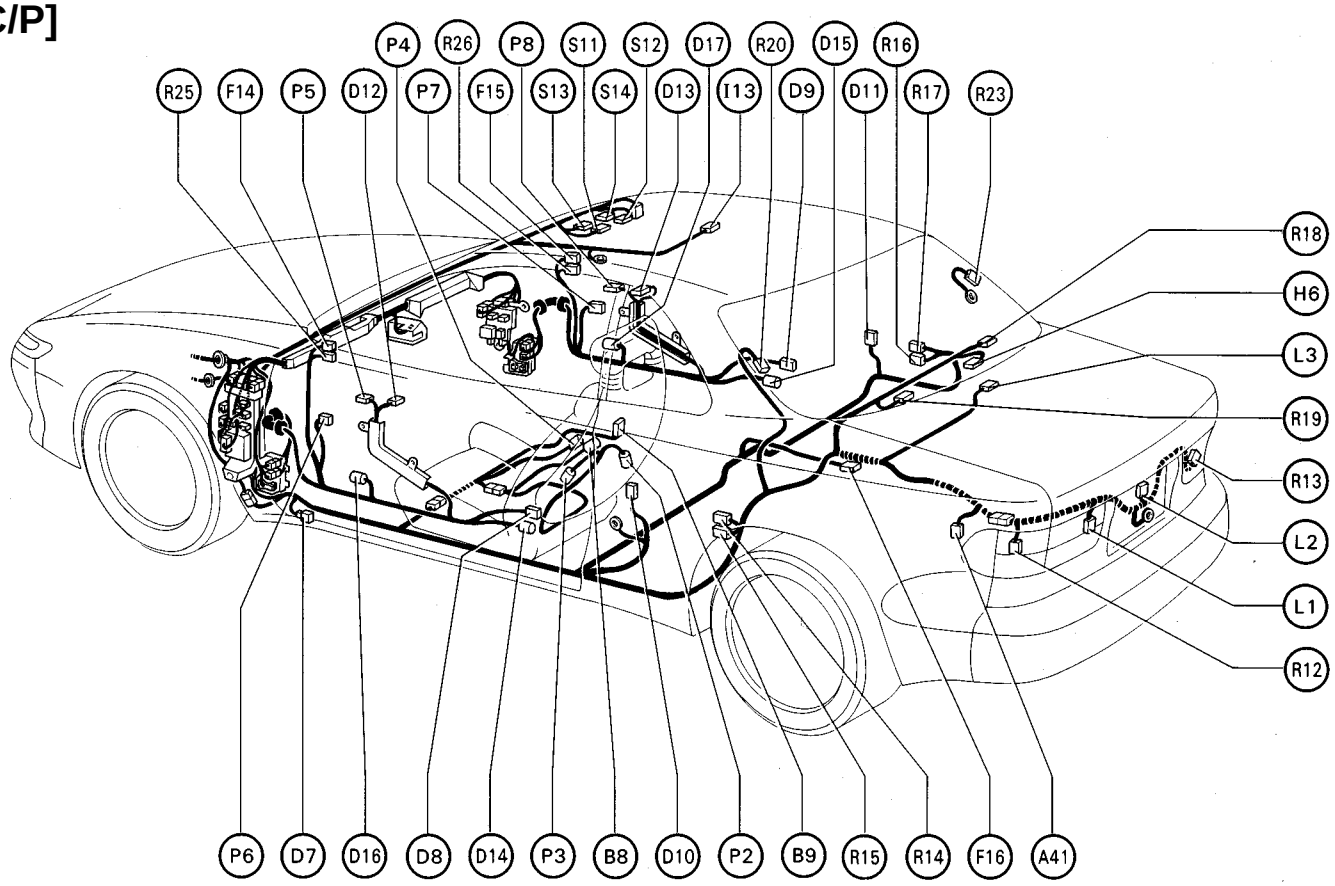
F 14 Front Tweeter (Speaker) LH
F 15 Front Tweeter (Speaker) RH
F 16 Fuel Pump and Fuel Sender

H 6 High Mount Stop Light

I 13 Interior Light

Position of Parts in Body

[C/P]



L 1 License Plate Light
L 2 Luggage Compartment Door Courtesy SW (C/P)
L 3 Luggage Compartment Light (C/P)
L 4 Luggage Compartment Light (L/B)

P 2 Power Seat Motor (for Lumbar Support)
P 3 Power Seat Motor (for Side Support)
P 4 Power Seat SW
P 5 Power Window Master SW
P 6 Power Window Motor LH
P 7 Power Window Motor RH
P 8 Power Window SW RH

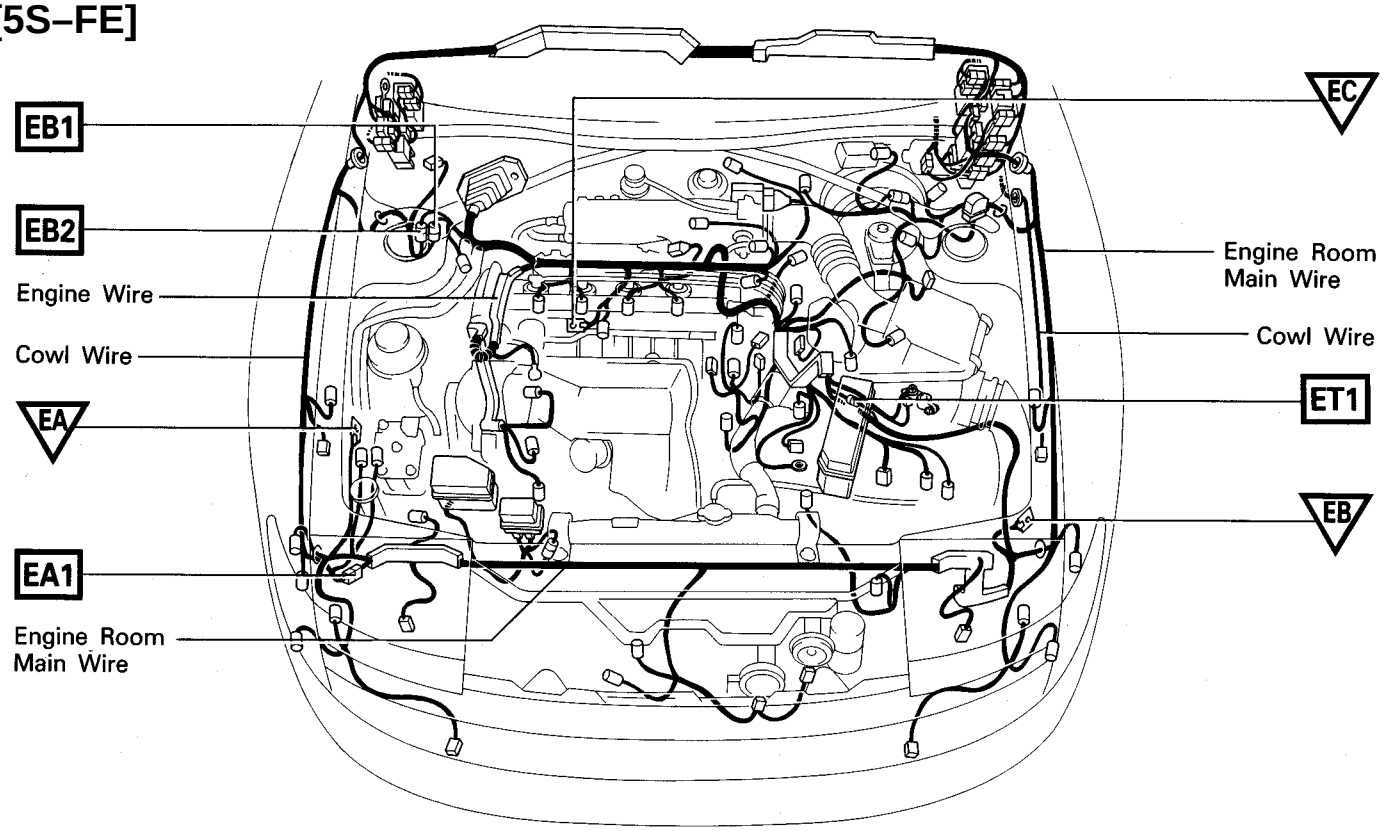
R 12 Rear Combination Light LH
R 13 Rear Combination Light RH
R 14 Rear Speaker LH
R 15 Rear Speaker LH
R 16 Rear Speaker RH
R 17 Rear Speaker RH
R 18 Rear Tweeter (Speaker) LH
R 19 Rear Tweeter (Speaker) RH
R 20 Rear Window Defogger (+, C/P)
R 21 Rear Window Defogger (+, L/B w/o Diversity Antenna)
R 22 Rear Window Defogger (+, L/B w/ Diversity Antenna)
R 23 Rear Window Defogger (–)
R 24 Rear Wiper Motor and Relay
R 25 Remote Control Mirror LH
R 26 Remote Control Mirror RH

S 11 Sun Roof Control Relay
S 12 Sun Roof Control SW and Personal Light
S 13 Sun Roof Limit SW
S 14 Sun Roof Motor

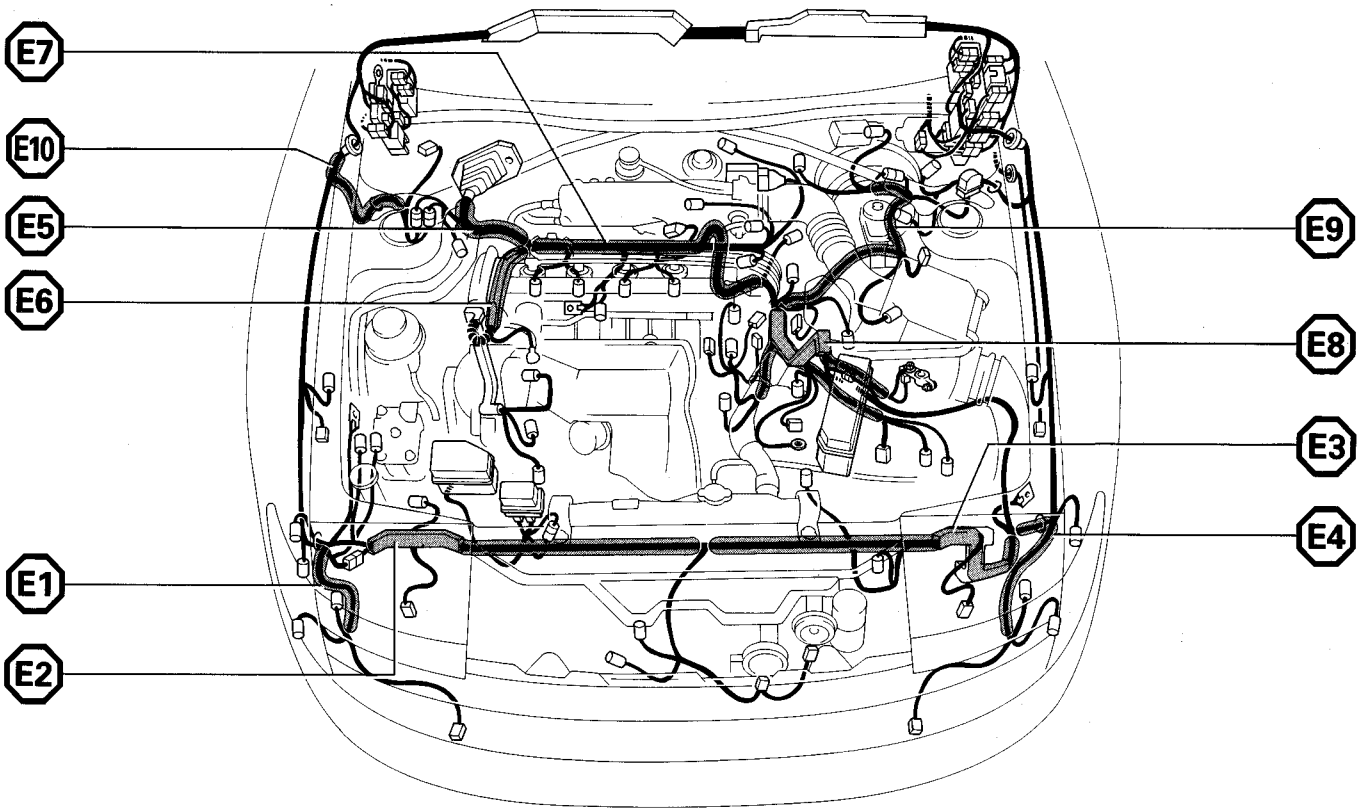
▭ : Location of Connector Joining Wire Harness and Wire Harness

▽ : Location of Ground Points

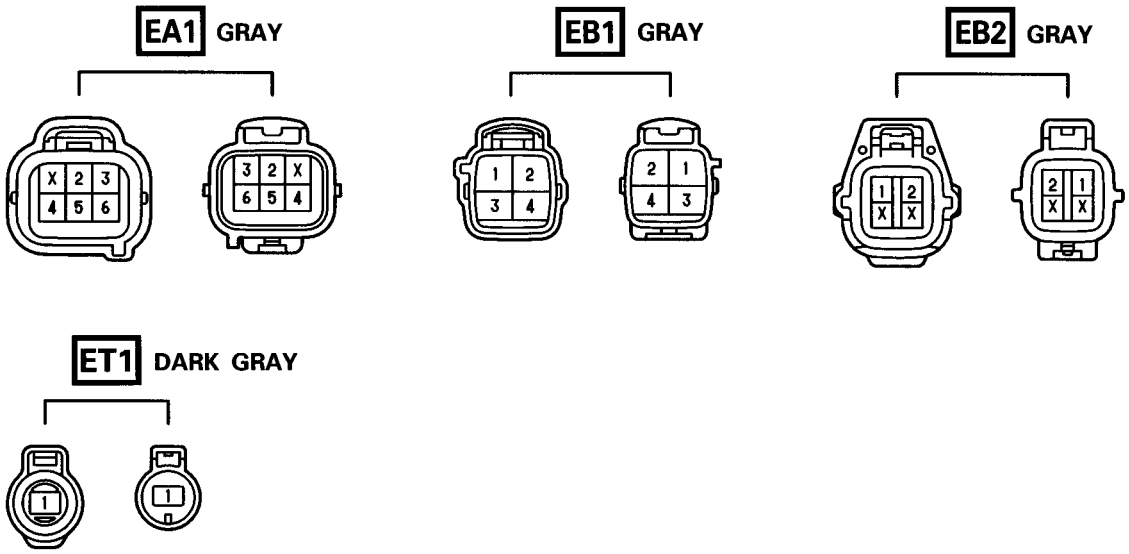
[5S–FE]



⬡ : Location of Splice Points



Connector Joining Wire Harness and Wire Harness

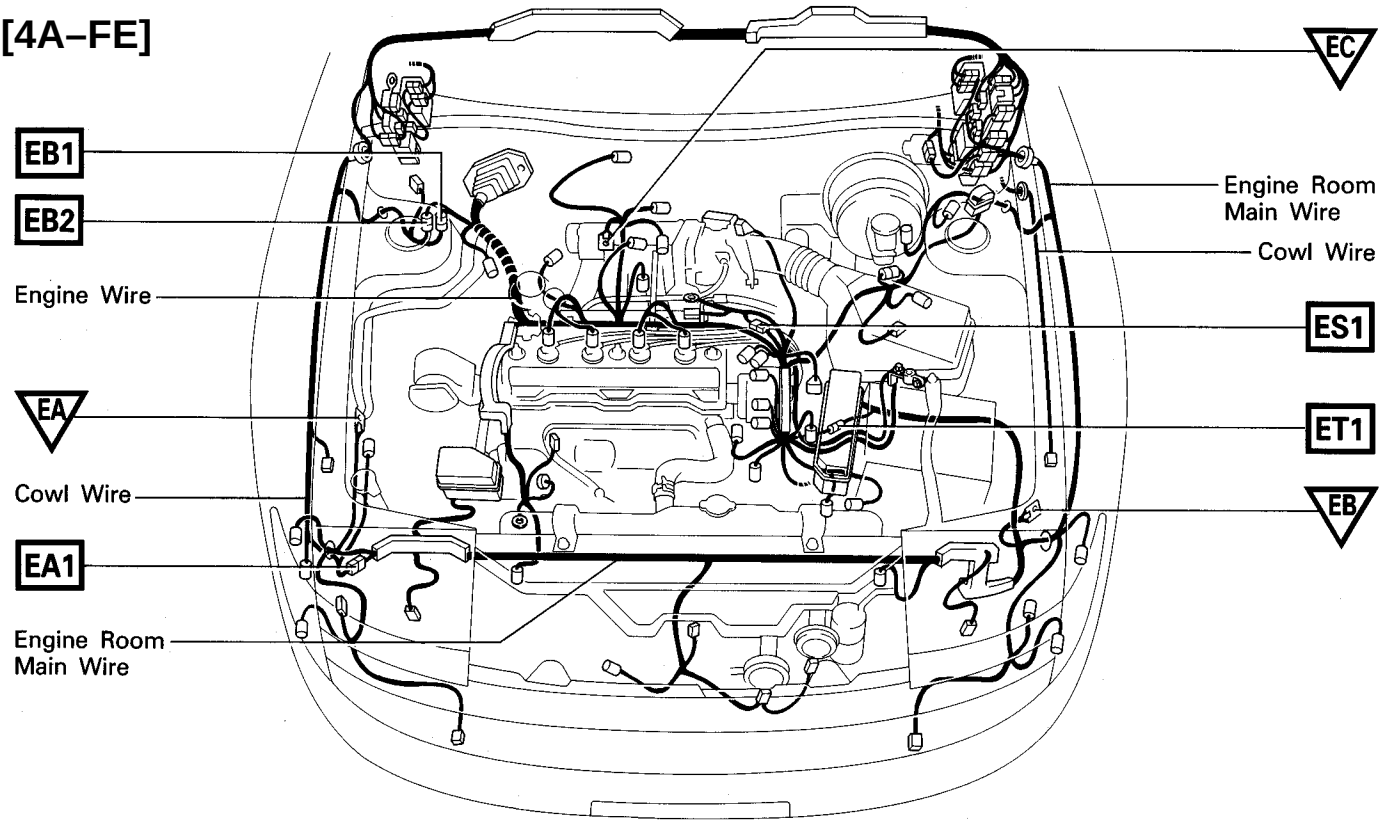


CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	COWL WIRE AND ENGINE ROOM MAIN WIRE (FRONT SIDE OF RIGHT FRONT FENDER)
EB1	ENGINE WIRE AND COWL WIRE (REAR SIDE OF RIGHT FRONT FENDER)
EB2	
ET1	ENGINE ROOM MAIN WIRE AND ENGINE WIRE (NEAR THE J/B NO. 2)

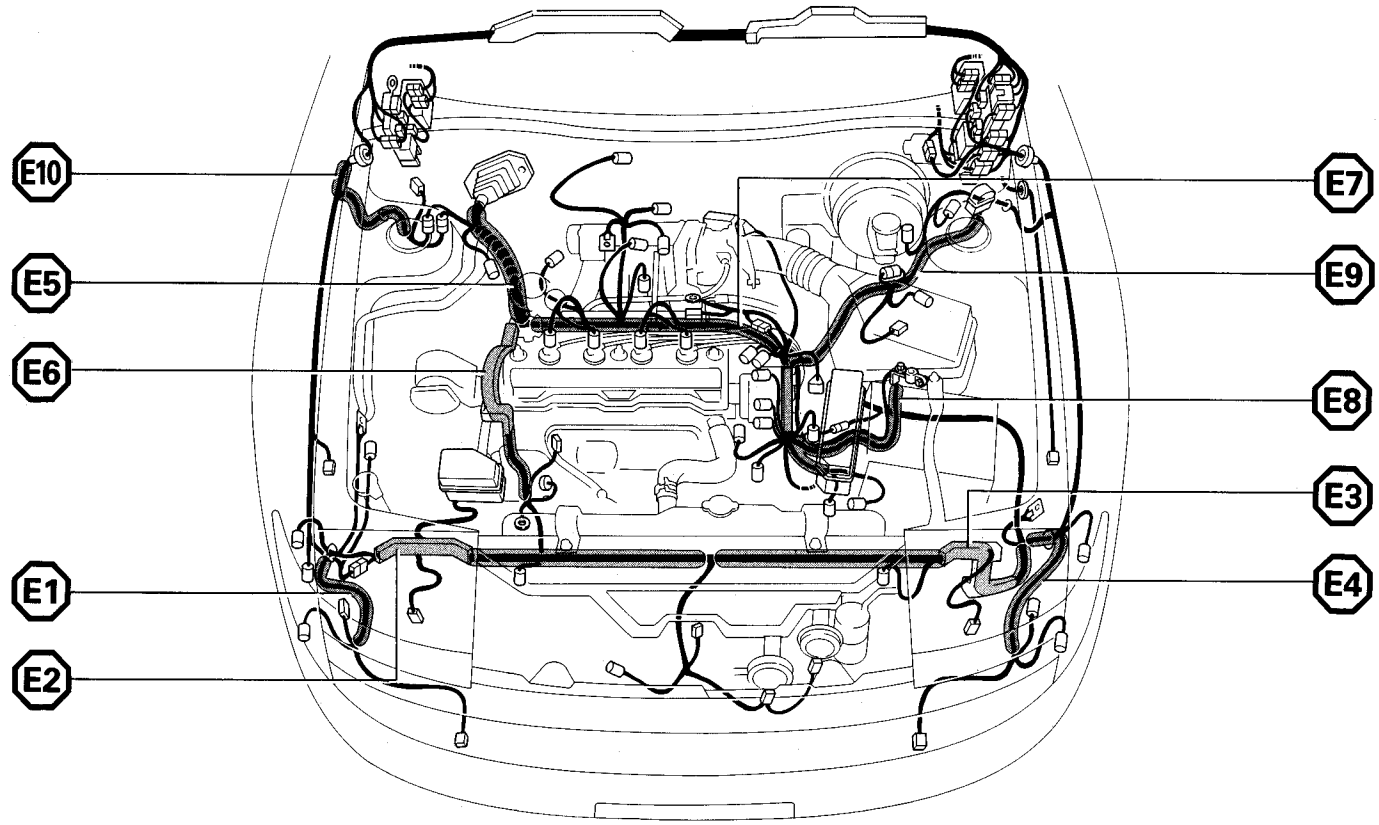
▭ : Location of Connector Joining Wire Harness and Wire Harness

▽ : Location of Ground Points

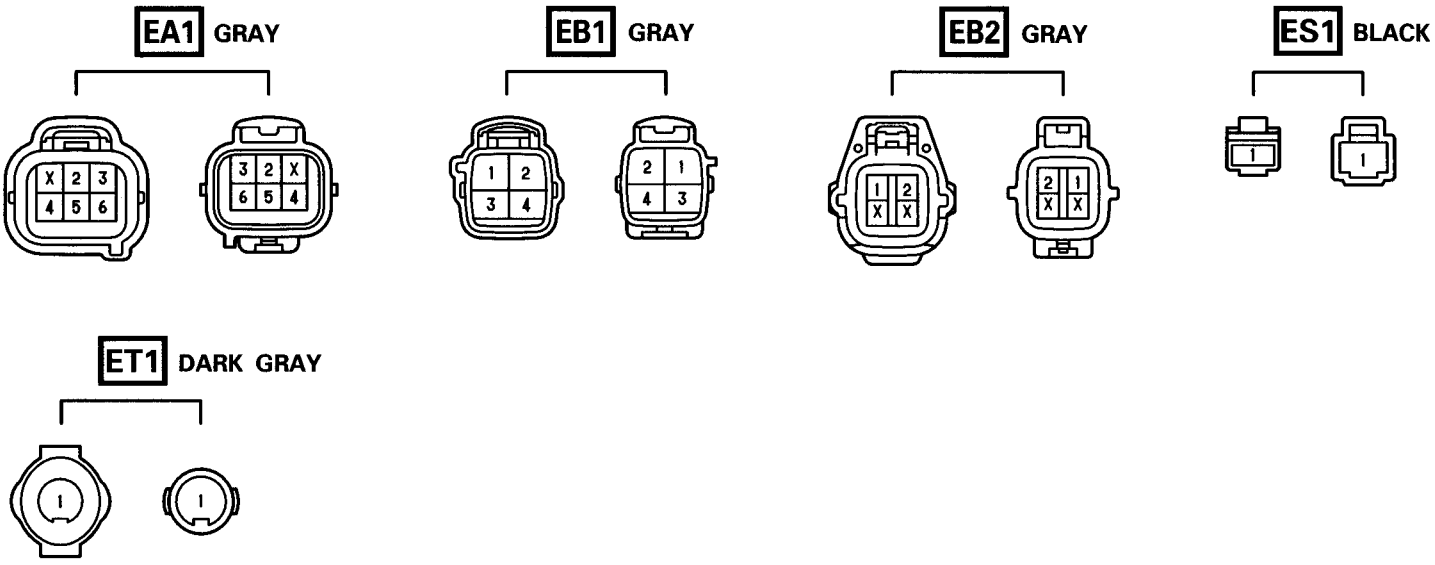
[4A–FE]



○ : Location of Splice Points



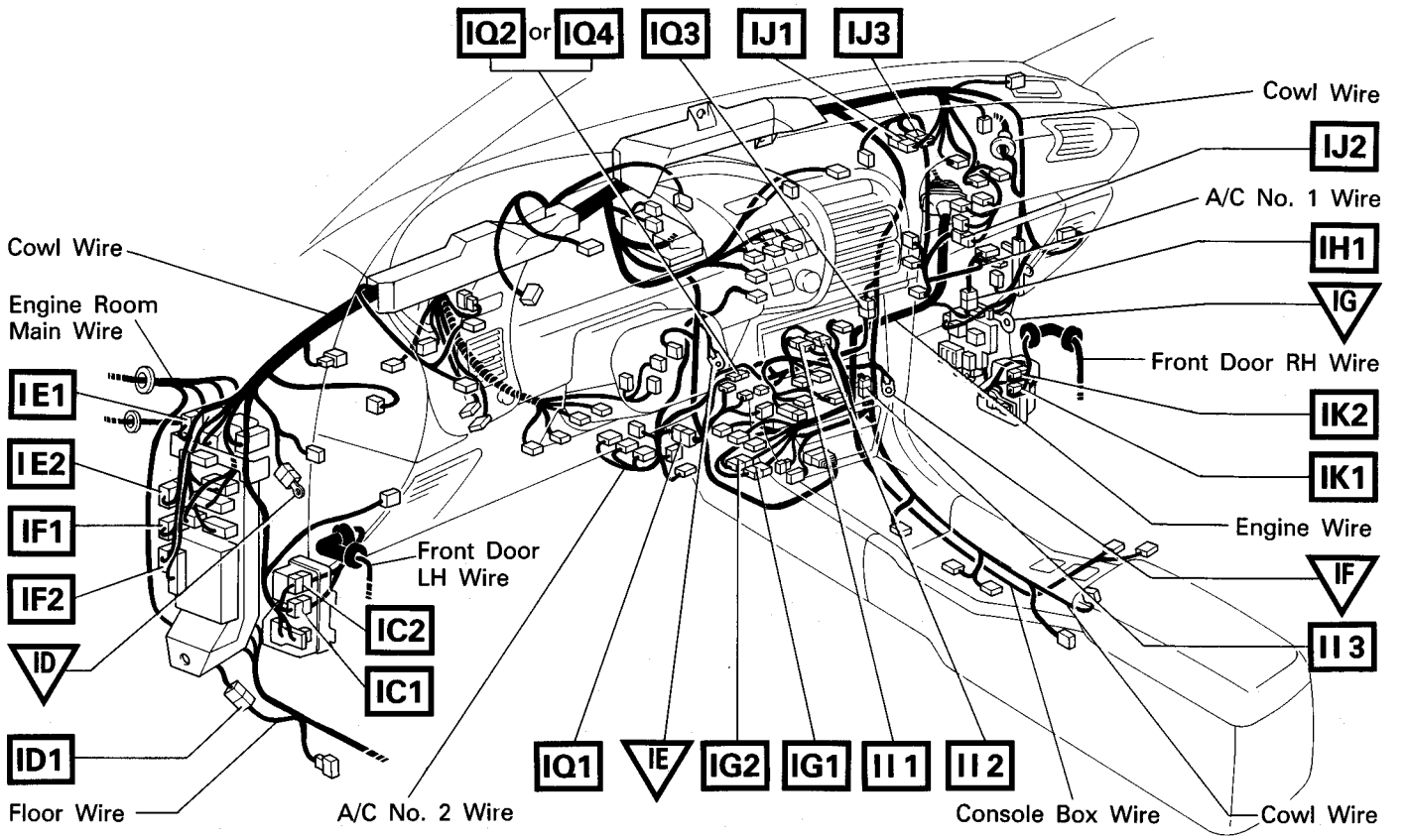
Connector Joining Wire Harness and Wire Harness



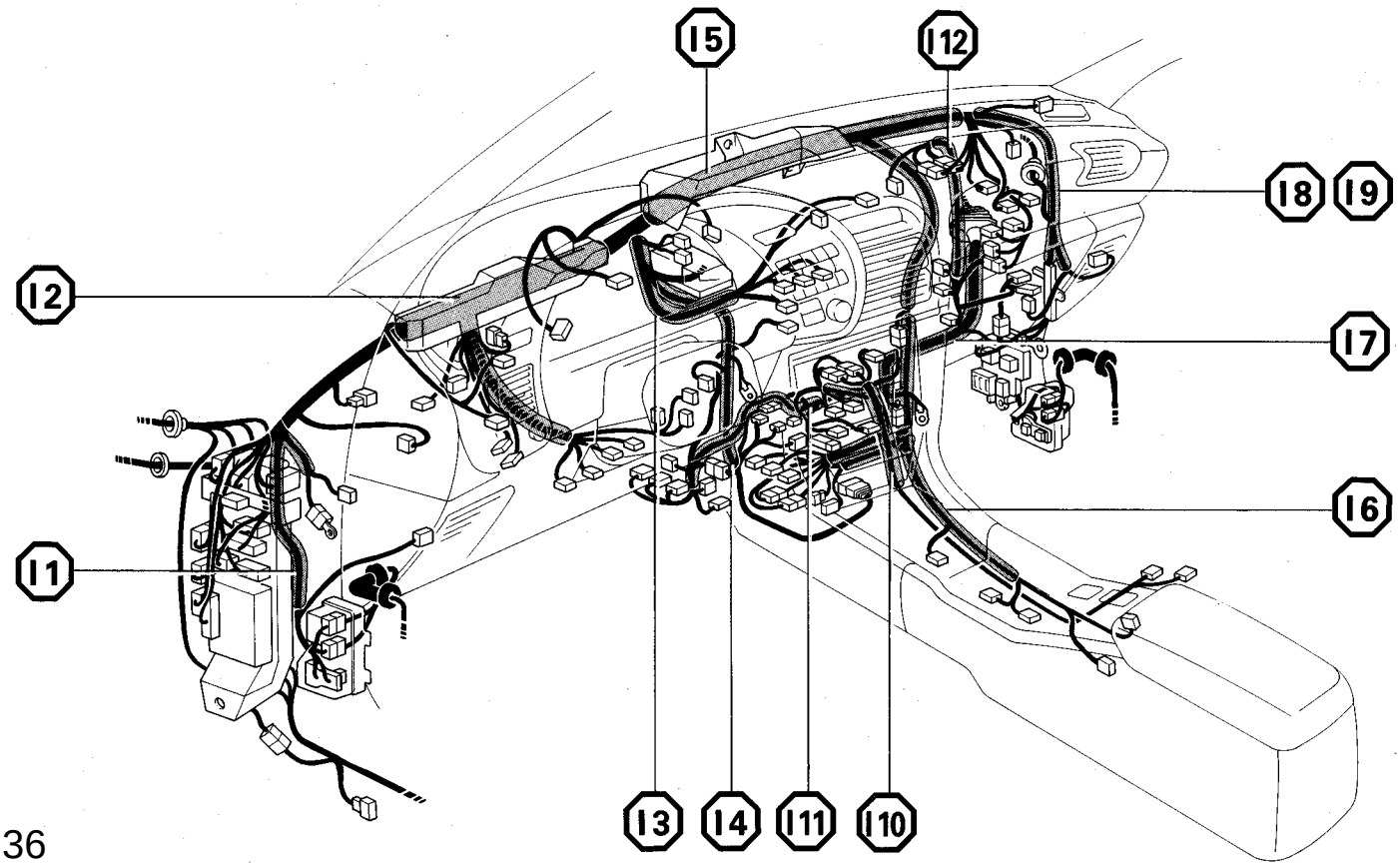
CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	COWL WIRE AND ENGINE ROOM MAIN WIRE (FRONT SIDE OF RIGHT FRONT FENDER)
EB1	ENGINE WIRE AND COWL WIRE (REAR SIDE OF RIGHT FRONT FENDER)
EB2	
ES1	ENGINE WIRE AND ENGINE ROOM NO.2 WIRE (NEAR THE STARTER)
BT1	ENGINE ROOM MAIN WIRE AND ENGINE WIRE (NEAR THE J/B NO. 2)

▭ : Location of Connector Joining Wire Harness and Wire Harness

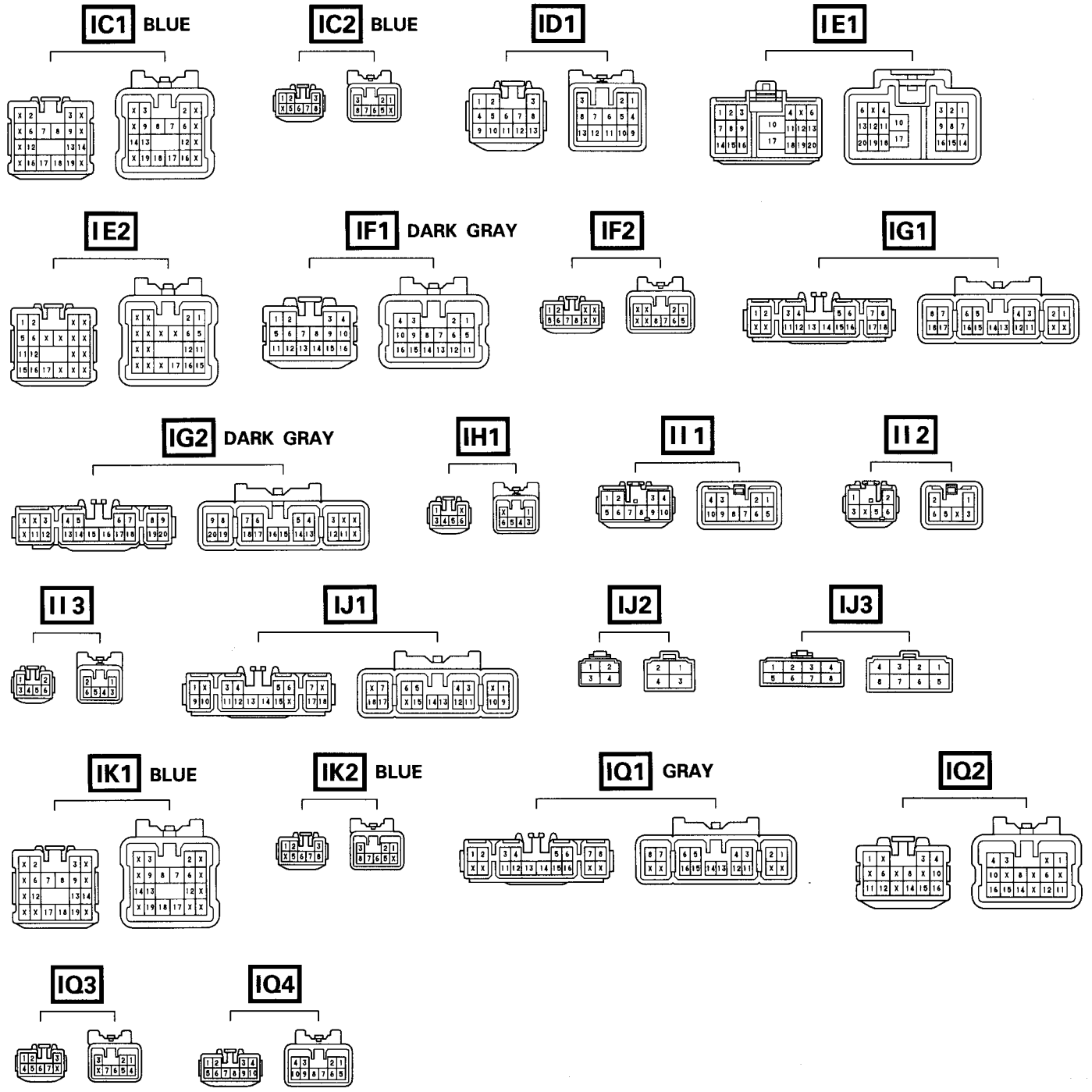
▽ : Location of Ground Points



○ : Location of Splice Points



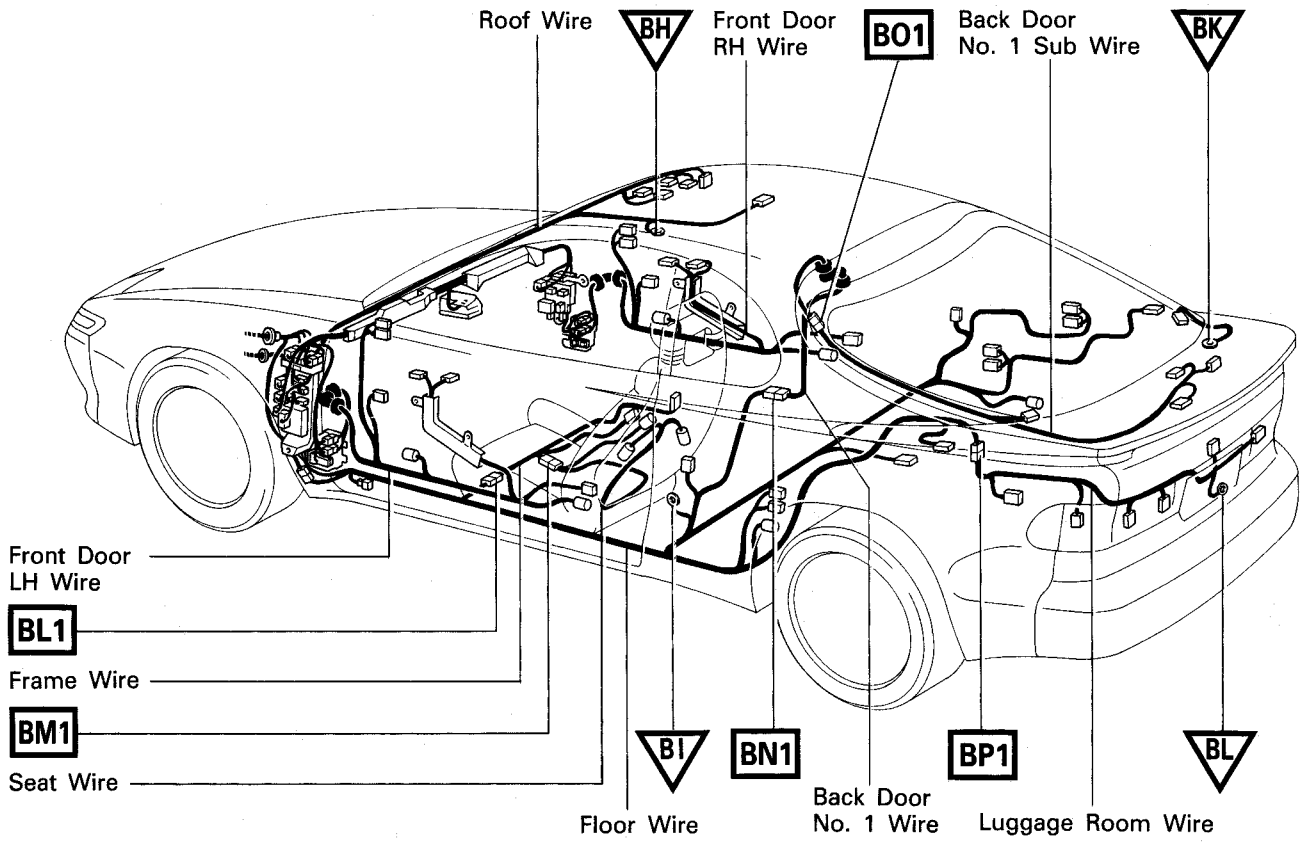
Connector Joining Wire Harness and Wire Harness



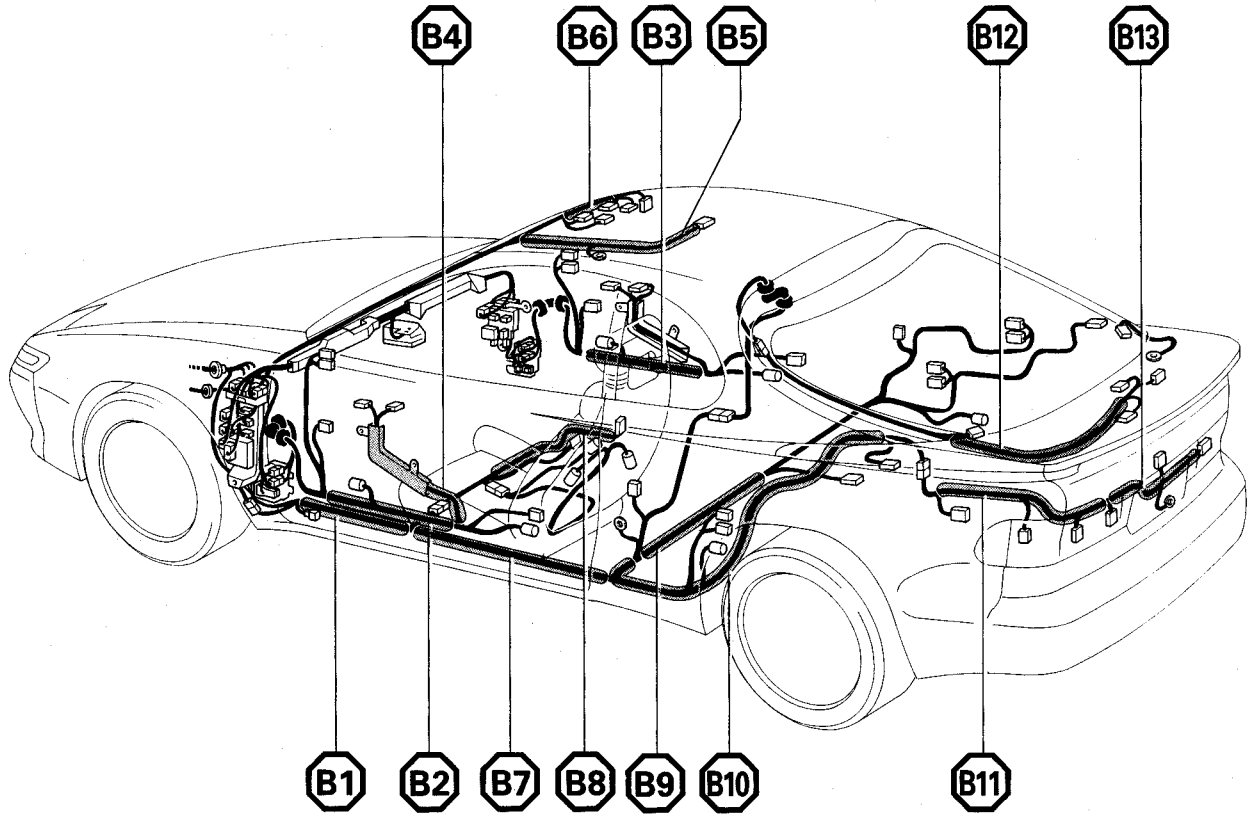
CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC1, IC2	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
ID1	ENGINE ROOM MAIN WIRE AND FLOOR WIRE (LEFT KICK PANEL)
IE1, IE2	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1, IF2	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
IG1, IG2	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)
IH1	ENGINE WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)
II1, II2, II3	COWL WIRE AND CONSOLE BOX WIRE (INSTRUMENT PANEL CENTER)
IJ1, IJ2, IJ3	COWL WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)
IK1, IK2	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
IQ1, IQ2, IQ3, IQ4	COWL WIRE AND A/C NO. 2 WIRE (BESIDE HEATER UNIT)

▭ : Location of Connector Joining Wire Harness and Wire Harness

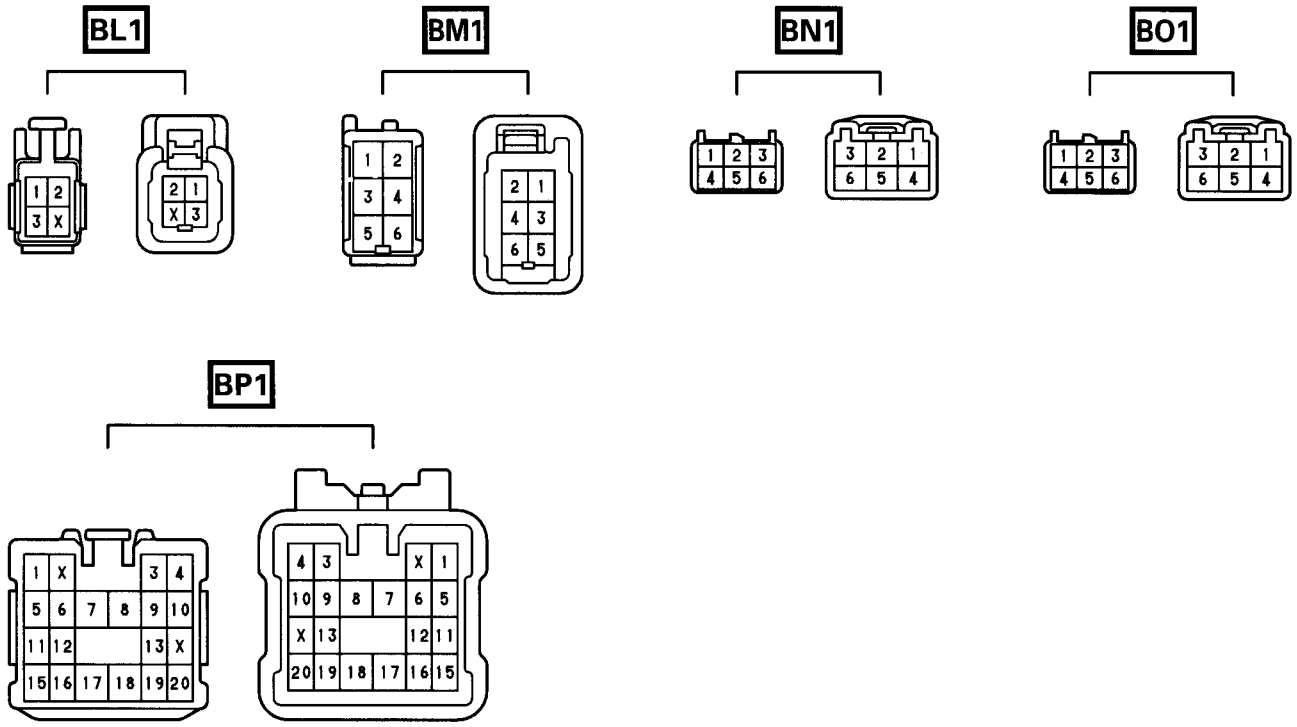
▽ : Location of Ground Points



○ : Location of Splice Points



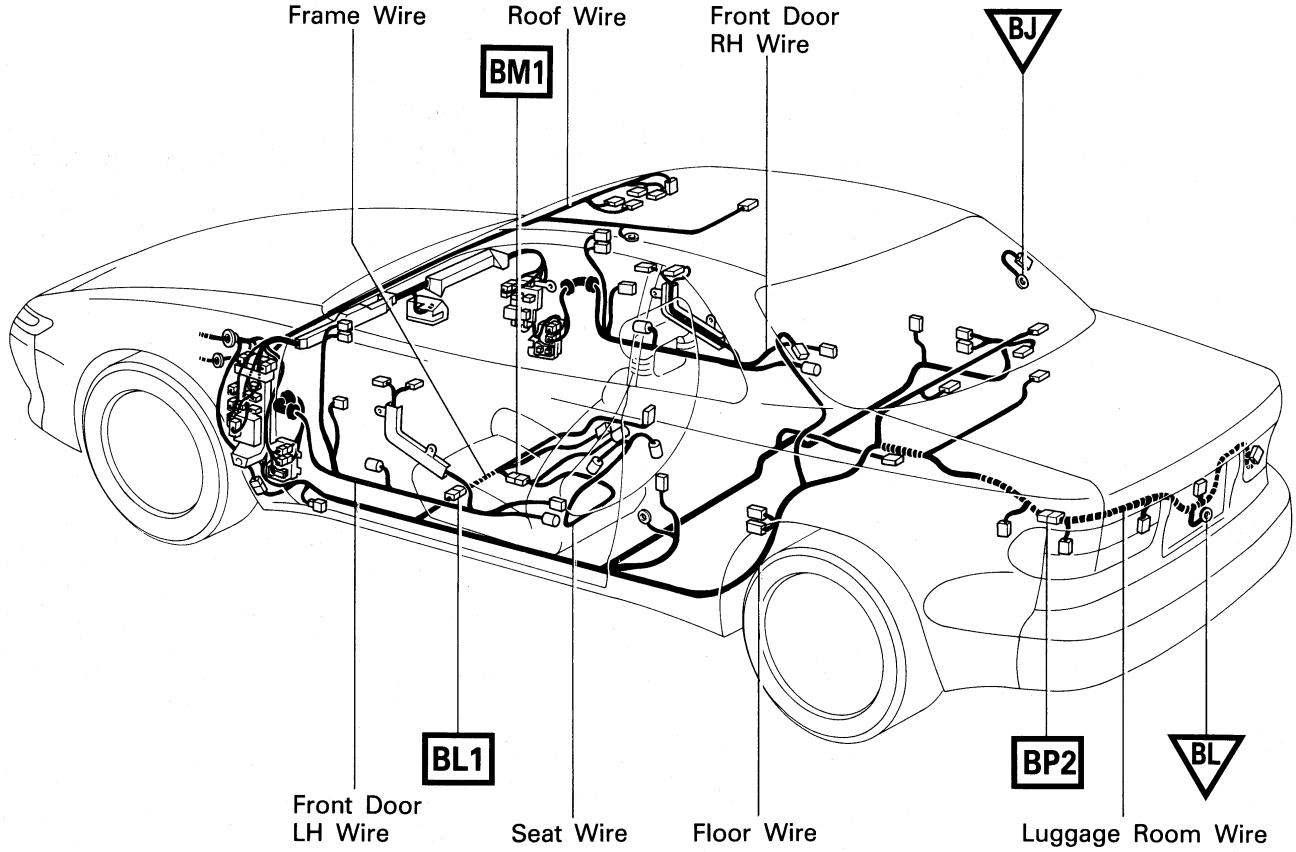
Connector Joining Wire Harness and Wire Harness



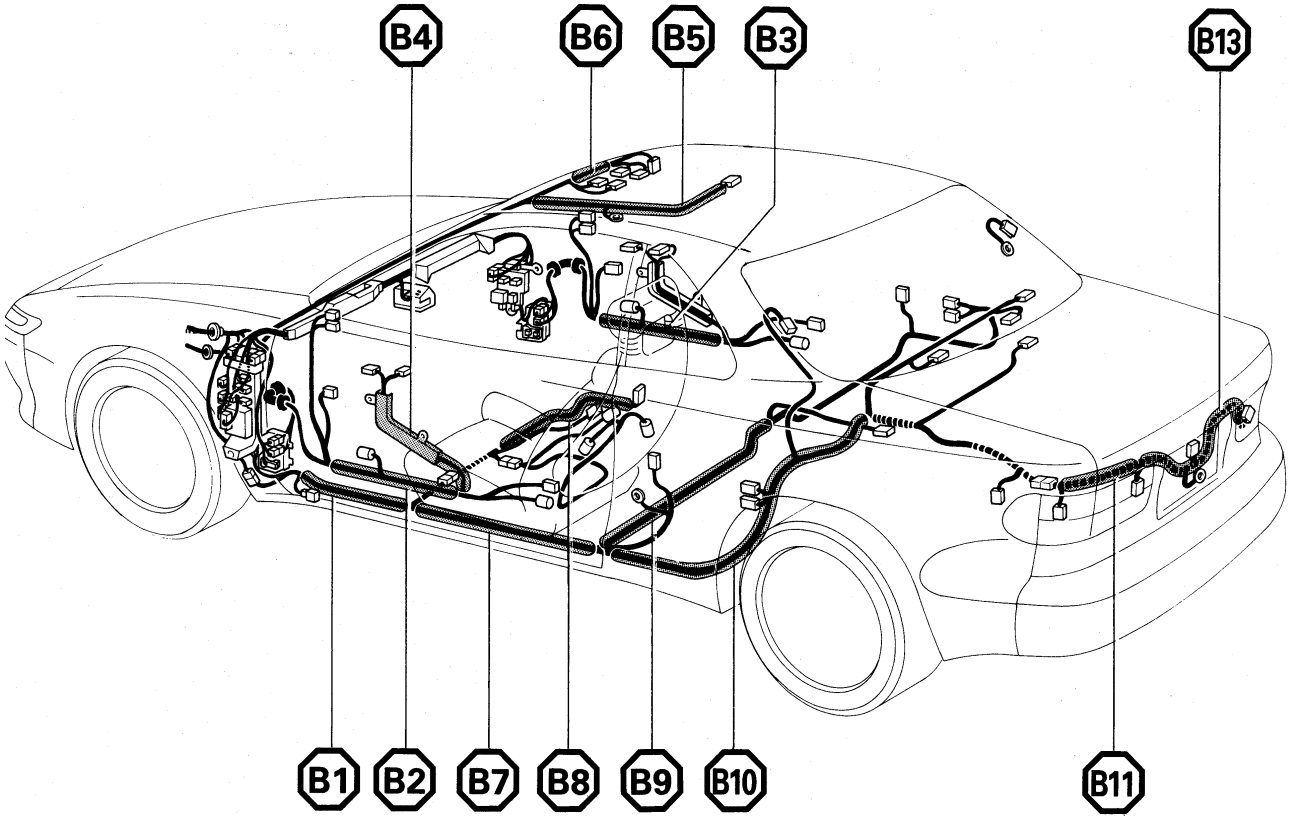
CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
BL1	FLOOR WIRE AND FRAME WIRE (LEFT SIDE OF FRONT FLOOR PANEL)
BM1	FRAME WIRE AND SEAT WIRE (UNDER THE DRIVE'S SEAT)
BN1	BACK DOOR NO . 1 WIRRE AND FLOOR WIRE (LET SIDE PACKAGE TRAY TRIM)
BO1	BACK DOOR NO. 1 WIRE AND BACK DOOR NO. 1 SUB WIRE (BACK DOOR UPPER LEFT)
BP1	FLOOR WIRE AND LUGGAGE ROOM WIRE (LEFT QUARTER PANEL CENTER)

▭ : Location of Connector Joining Wire Harness and Wire Harness

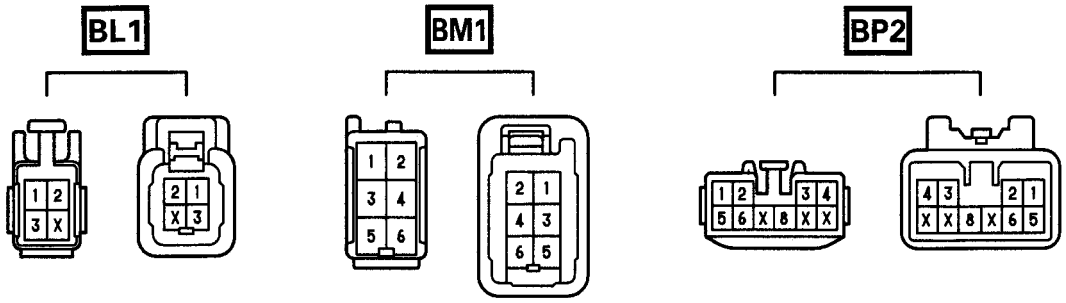
▽ : Location of Ground Points



○ : Location of Splice Points



Connector Joining Wire Harness and Wire Harness

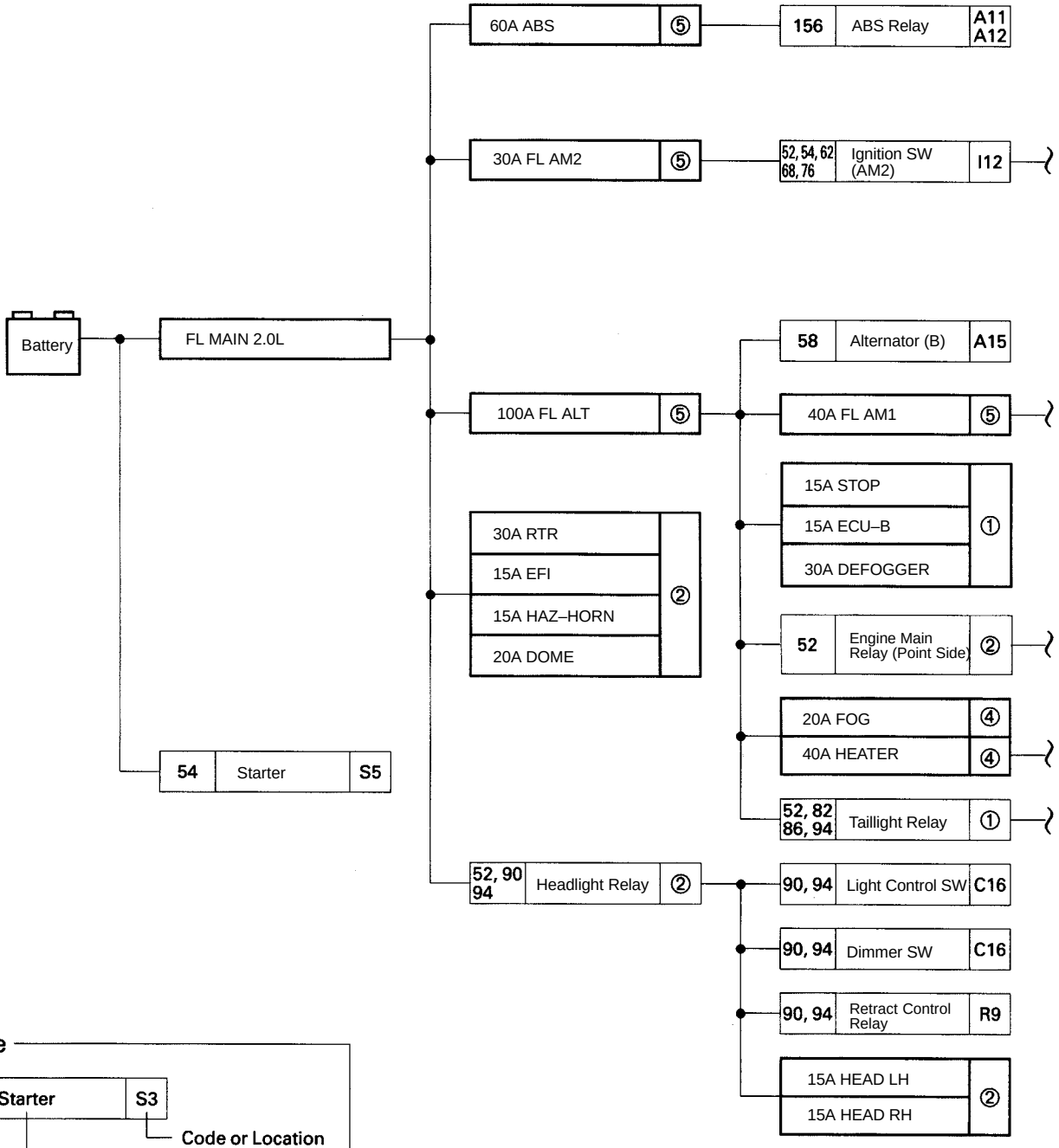


CODE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
BL1	FLOOR WIRE AND FRAME WIRE (LEFT SIDE OF FRONT FLOOR PANEL)
BP1	FLOOR WIRE AND LUGGAGE ROOM WIRE (LEFT QUARTER PANEL CENTER)
BP2	FLOOR WIRE AND LUGGAGE ROOM WIRE (LUGGAGE COMPARTMENT LEFT)

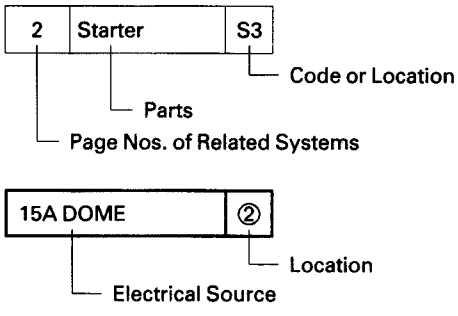
POWER SOURCE (Current Flow Chart)

The chart below shows the route by which current flows from the battery to each electrical source (Fusible Link, Circuit Breaker, Fuse, etc.) and other parts.

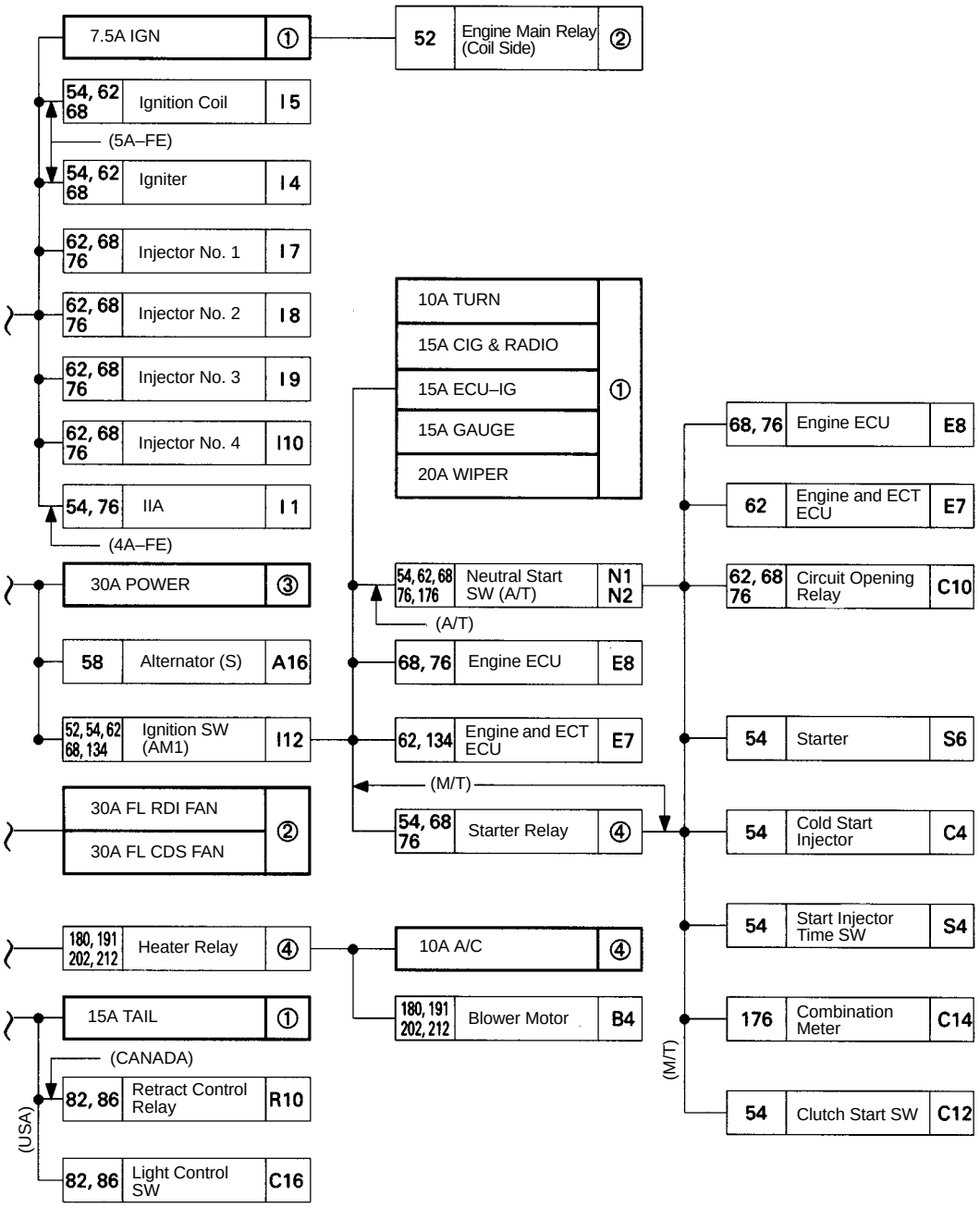
The next page and following pages show the parts to which each electrical source outputs current.



Example



[LOCATION] (1) : J/B No. 1 (See page 18) (2) : J/B No. 2 (See page 20) (3) : R/B No. 2 (See page 24)



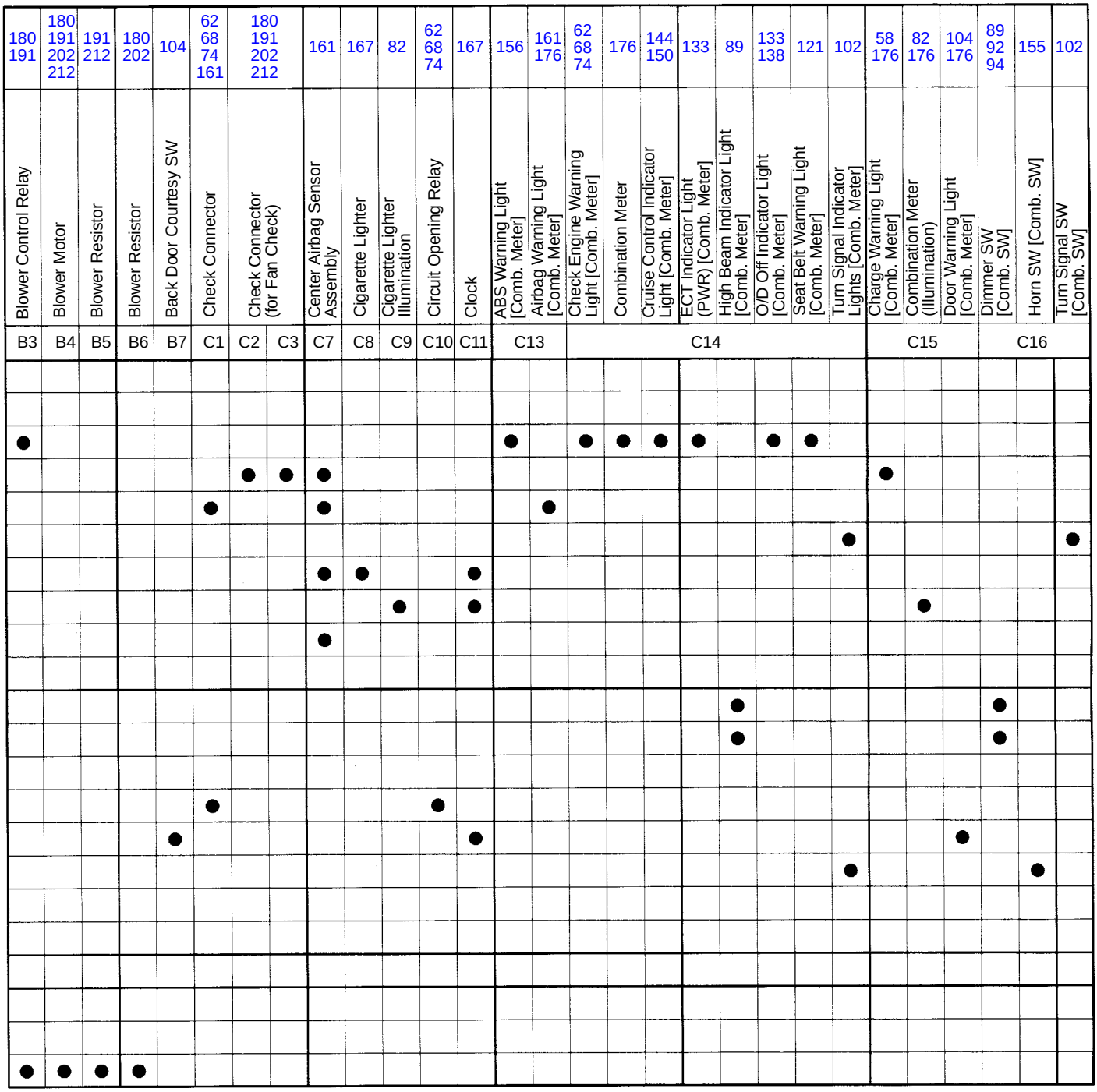
(4) : J/B No. 4 (See page 24)

(5) : Fusible Link Box (F10 See on page26)

POWER SOURCE (Current Flow Chart)

Location	CB or Fuse		Page Nos. of Related Systems	180 191 202 212				156	58	180 191 202 212	82 180 191 202 212	82 180	191 202 212	180 191	180 191 202	180 191 202 212	82	180 191		140	156	168	100	
			Parts	A/C Condenser Fan Motor	A/C Idle–Up VSV	A/C Magnet Clutch	A/C Pressure SW	ABS Actuator	ABS Relay	Alternator	A/C Amplifier	A/C Control Assembly (w/ ECT)	A/C Control Assembly (w/o ECT)	A/C Control Assembly	A/C Power Transistor	A/C System Amplifier	Air Vent Mode Control Servo Motor	Ashtray Illumination	Auto A/C Amplifier		Auto Tilt Away ECU	ABS ECU	Auto Antenna Control Relay and Motor	Back–Up Light SW (M/T)
			Code or Location	A2	A3	A4	A5	A7	A11	A16	A17	A18	A19	A20	A22	A25	A30	A31	A32	A34	A36	A38	A41	B1
①	30A	DEFOGGER																						
	20A	WIPER																						
	15A	GAUGE		●	●	●	●	●		●	●		●		●	●		●	●	●	●		●	
	7.5A	IGN				●			●															
	15A	ECU–B																				●		
	10A	TURN																						
	15A	CIG & RADIO																	●	●			●	
	15A	TAIL										●	●					●						
	15A	ECU–IG								●												●	●	
	15A	STOP																				●		
②	15A	HEAD LH																						
	15A	HEAD RH																						
	30A	RTR																						
	15A	EFI																						
	20A	DOME																		●			●	
	15A	HAZ–HORN																						
	30A	FL RDI FAN																						
	30A	FL CDS FAN	●																					
③	30A	POWER																			●			
④	20A	FOG																						
	10A	A/C		●		●					●	●	●											
	40A	HEATER												●	●				●	●				

[LOCATION] (1) : J/B No. 1 (See page 18) (2) : J/B No. 2 (See page 20) (3) R/B No. 2 (See page 23)

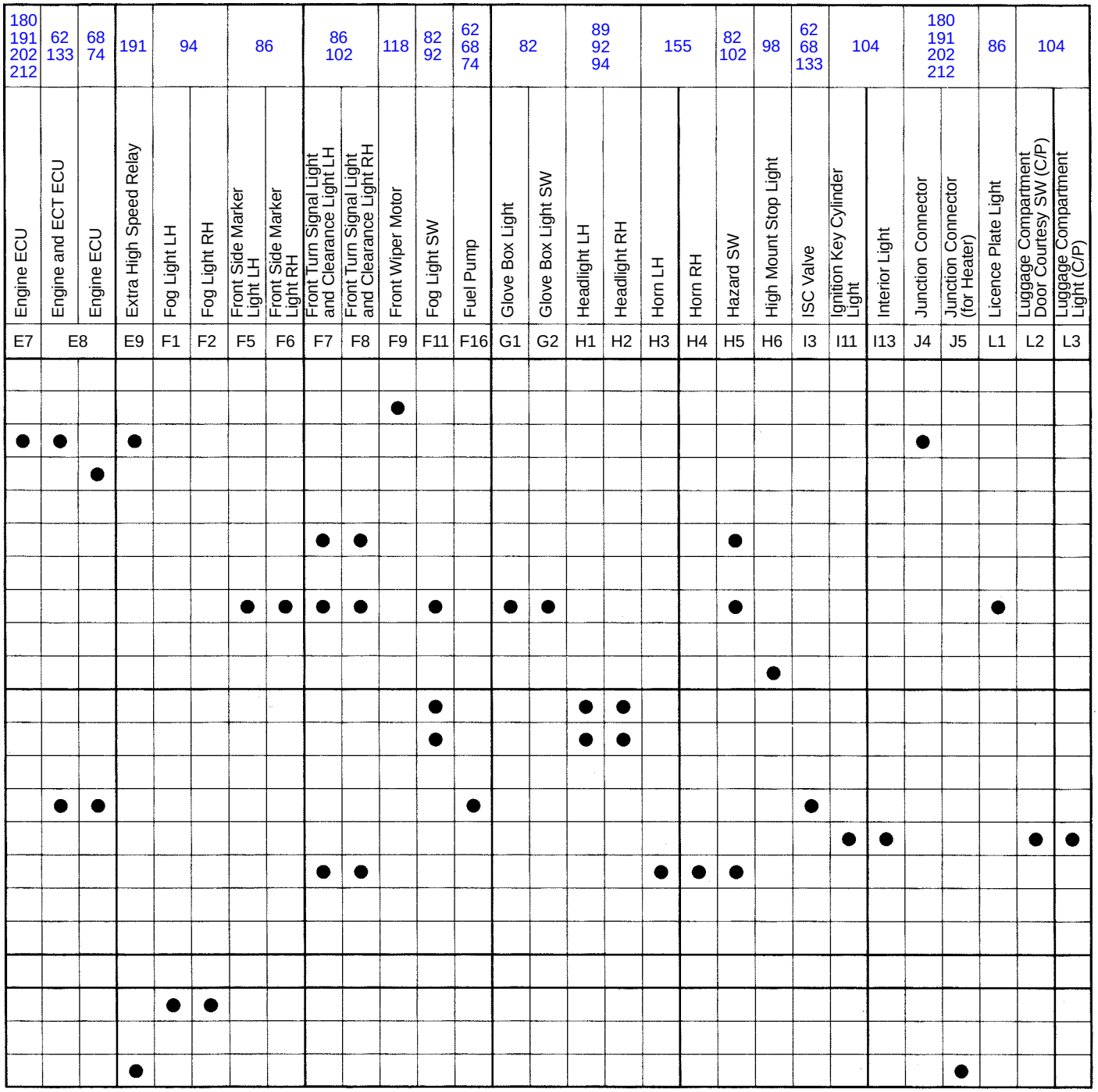


(4) : R/B No. 4 (See page 24)

POWER SOURCE (Current Flow Chart)

Location	CB or Fuse		Page Nos. of Related Systems	118	116	144	150	144	82 124	138	108 126	108 111	104					111		82 133	74 191 212	62	68	62 133 180 202	68	
			Parts	Front Wiper and Washer SW [Comb. SW]	Rear Wiper and Washer SW [Comb. SW]	Cruise Control ECU (Motor)	Cruise Control ECU (Vacuum)	Cruise Control ECU	Defogger SW	Diode (for O/D System)	Diode (for Key Off)	Door Lock ECU	Diode (for Interior System)	Door Courtesy Light LH	Door Courtesy Light RH	Door Courtesy SW LH	Door Courtesy SW RH	Door Lock Motor LH	Door Lock Motor RH	ECT Pattern Select SW	Engine ECU	Engine and ECT ECU	Engine ECU	Engine and ECT ECU	Engine ECU	
			Code or Location	C17		C19		C20	D2	D3	D5	D6	D7	D8	D9	D10	D11	D14	D15	E4	E5	E6		E7		
①	30A	DEFOGGER																								
	20A	WIPER		●	●																					
	15A	GAUGE					●	●	●	●	●	●									●	●			●	●
	7.5A	IGN																								
	15A	ECU–B																								
	10A	TURN																								
	15A	CIG & RADIO																			●				●	●
	15A	TAIL							●																	
	15A	ECU–IG				●	●																			
	15A	STOP				●	●																		●	●
②	15A	HEAD LH																								
	15A	HEAD RH																								
	30A	RTR																								
	15A	EFI																				●	●	●	●	●
	20A	DOME											●	●	●	●	●									
	15A	HAZ–HORN																								
	30A	FL RDI FAN																								
	30A	FL CDS FAN																								
③	30A	POWER										●						●	●							
④	20A	FOG																								
	10A	A/C																								
	40A	HEATER																								

[LOCATION] (1) : J/B No. 1 (See page 18) (2) : J/B No. 2 (See page 20) (3) R/B No. 2 (See page 23)

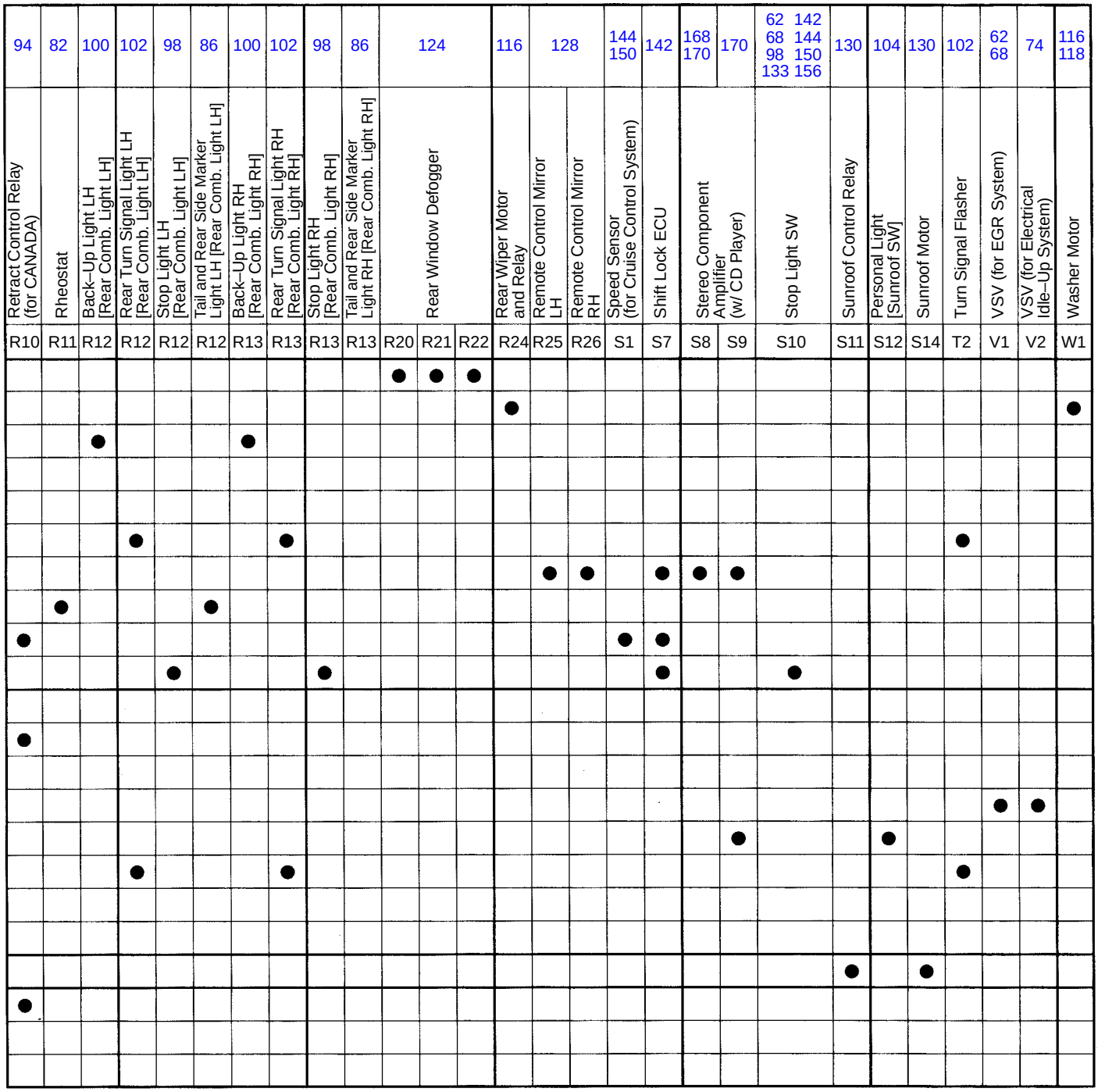


(4) : R/B No. 4 (See page 24)

POWER SOURCE (Current Flow Chart)

Location	CB or Fuse		Page Nos. of Related Systems	104	100	100	133	138	74	82 133 138	126			108				180 191 202 212	89		180 191 202 211	82	82 168 174	128	89 94
			Parts	Luggage Compartment Light (L/B)	Back–Up Light SW (w/o ECT of A/T)	Back–Up Light SW (w/ ECT of A/T)	Neutral Start SW	O/D Solenoid	Oxygen Sensor (for Ex. California)	O/D Main SW	Power Seat Motor (for Lumber Support)	Power Seat Motor (for Side Support)	Power Seat SW	Power Window Master SW	Power Window Motor LH	Power Window Motor RH	Power Window SW RH	Radiator Fan Motor	Retract Motor LH	Retract Motor RH	RECIR/FRESH Control Servo Motor	Radio and Player (w/ CD Player)	Radio and Player (w/o CD Player)	Remote Control Mirror SW	Retract Control Relay
			Code or Location	L4	N1	N2		O1	O6	O7	P2	P3	P4	P5	P6	P7	P8	R1	R2	R3	R4	R5	R6	R8	R9
①	30A	DEFOGGER																							
	20A	WIPER																							
	15A	GAUGE		●	●	●	●		●												●				
	7.5A	IGN																							
	15A	ECU–B																							
	10A	TURN																							
	15A	CIG & RADIO																					●	●	
	15A	TAIL								●												●	●		
	15A	ECU–IG																							
	15A	STOP																							
②	15A	HEAD LH																							
	15A	HEAD RH																							
	30A	RTR																	●	●					●
	15A	EFI							●																
	20A	DOME		●																			●		
	15A	HAZ–HORN																							
	30A	FL RDI FAN																●							
	30A	FL CDS FAN																●							
③	30A	POWER									●	●	●	●	●	●	●								
④	20A	FOG																							
	10A	A/C																							
	40A	HEATER																							

[LOCATION] (1) : J/B No. 1 (See page 18) (2) : J/B No. 2 (See page 20) (6) R/B No. 2 (See page 23)



(4) : R/B No. 4 (See page 24)

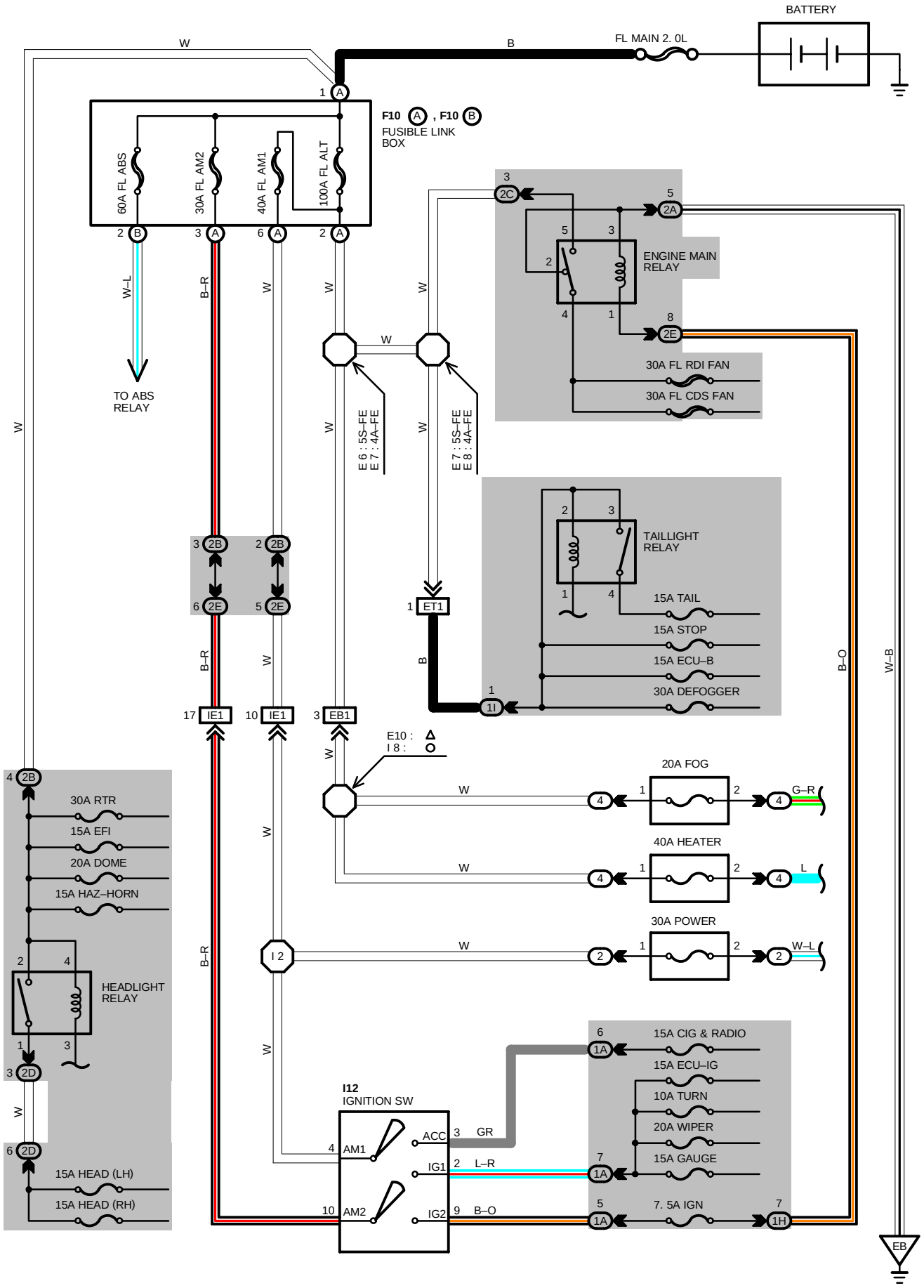
POWER SOURCE (Current Flow Chart)

Location	CB or Fuse		Page Nos. of Related Systems	138	180 191 202 212	124	62 68	104 106 121	62 68 74 133	180 191 202 212	108 126 130	180 191 202 212	92 94	180 191 202 212				155
			Parts	Water Temp. SW (for O/D System)	Water Temp. SW (for Fans Control)	Defogger Relay	Diode	Integration Relay	EFI Main Relay	Radiator Fan Relay No. 1	Power Main Relay	Heater Relay	Fog Light Relay	A/C Condenser Fan Relay No. 2	A/C Condenser Fan Relay No. 3	A/C Magnet Clutch Relay	Horn Relay	
			Code or Location	W2	W4	①			②		③	④	⑥	⑦				
①	30A	DEFOGGER																
	20A	WIPER																
	15A	GAUGE	●		●		●				●	●			●	●		
	7.5A	IGN		●				●	●					●				
	15A	ECU–B																
	10A	TURN						●										
	15A	CIG & RADIO						●										
	15A	TAIL					●											
	15A	ECU–IG																
	15A	STOP																
②	15A	HEAD LH											●					
	15A	HEAD RH											●					
	30A	RTR																
	15A	EFI							●									
	20A	DOME						●										
	15A	HAZ–HORN															●	
	30A	FL RDI FAN								●								
	30A	FL CDS FAN												●	●			
③	30A	POWER									●							
④	20A	FOG																
	10A	A/C																
	40A	HEATER										●						

[LOCATION] (1) : J/B No. 1 (See page 18) (2) : J/B No. 2 (See page 20) (3) : R/B No. 2 (See page 23)
(4) : R/B No. 4 (See page 24) (6) : R/B No. 3 (See page 23) (7) : R/B No. 5 (See page 24)

POWER SOURCE

△ W/ CRUISE CONTROL AND ABS
○ EX. W/ CRUISE CONTROL AND ABS



SERVICE HINTS

TAILLIGHT RELAY
1–2 : CLOSED WITH LIGHT CONTROL SW AT **TAIL** OR **HEAD** POSITION

ENGINE MAIN RELAY
4–5 : CLOSED WITH IGNITION SW AT **ON** OR **ST** POSITION

HEADLIGHT RELAY
4–5 : CLOSED WITH LIGHT CONTROL SW AT **HEAD** POSITION OR DIMMER SW AT **FLASH** POSITION

I12 IGNITION SW
4–3 : CLOSED WITH IGNITION KEY AT **ACC** OR **ON** POSITION
9–10 : CLOSED WITH IGNITION KEY AT **ON** OR **ST** POSITION

: PARTS LOCATION

CODE		SEE PAGE	CODE		SEE PAGE	CODE	SEE PAGE
F10	A	26 (5S–FE), 27 (4A–FE)	**F10**	B	26 (5S–FE), 27 (4A–FE)	**I12**	29

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	23	R/B NO. 2 (LEFT KICK PANEL)
4	24	R/B NO. 4 (RIGHT KICK PANEL)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1I		
2A	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2B	20	ENGINE WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2C		
2D	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2E		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EB1	32 (5S–FE)	ENGINE WIRE AND COWL WIRE (REAR SIDE OF RIGHT FRONT FENDER)
	34 (4A–FE)	
ET1	32 (5S–FE)	ENGINE ROOM MAIN WIRE AND ENGINE WIRE (NEAR THE J/B NO. 2)
	34 (4A–FE)	
IE1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)

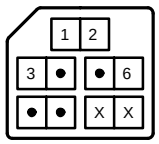
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EB	32 (5S–FE)	FRONT LEFT FENDER
	34 (4A–FE)	

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 6	32 (5S–FE)	ENGINE WIRE	**E 8**	34 (4A–FE)	ENGINE WIRE
	34 (4A–FE)		**E10**	32 (5S–FE)	COWL WIRE
E 7	32 (5S–FE)			34 (4A–FE)	
	34 (4A–FE)		**I 2**	36	
E 8	32 (5S–FE)	ENGINE WIRE	**I 8**		

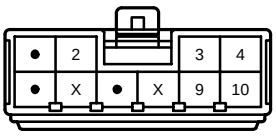
F10 (A) BLACK

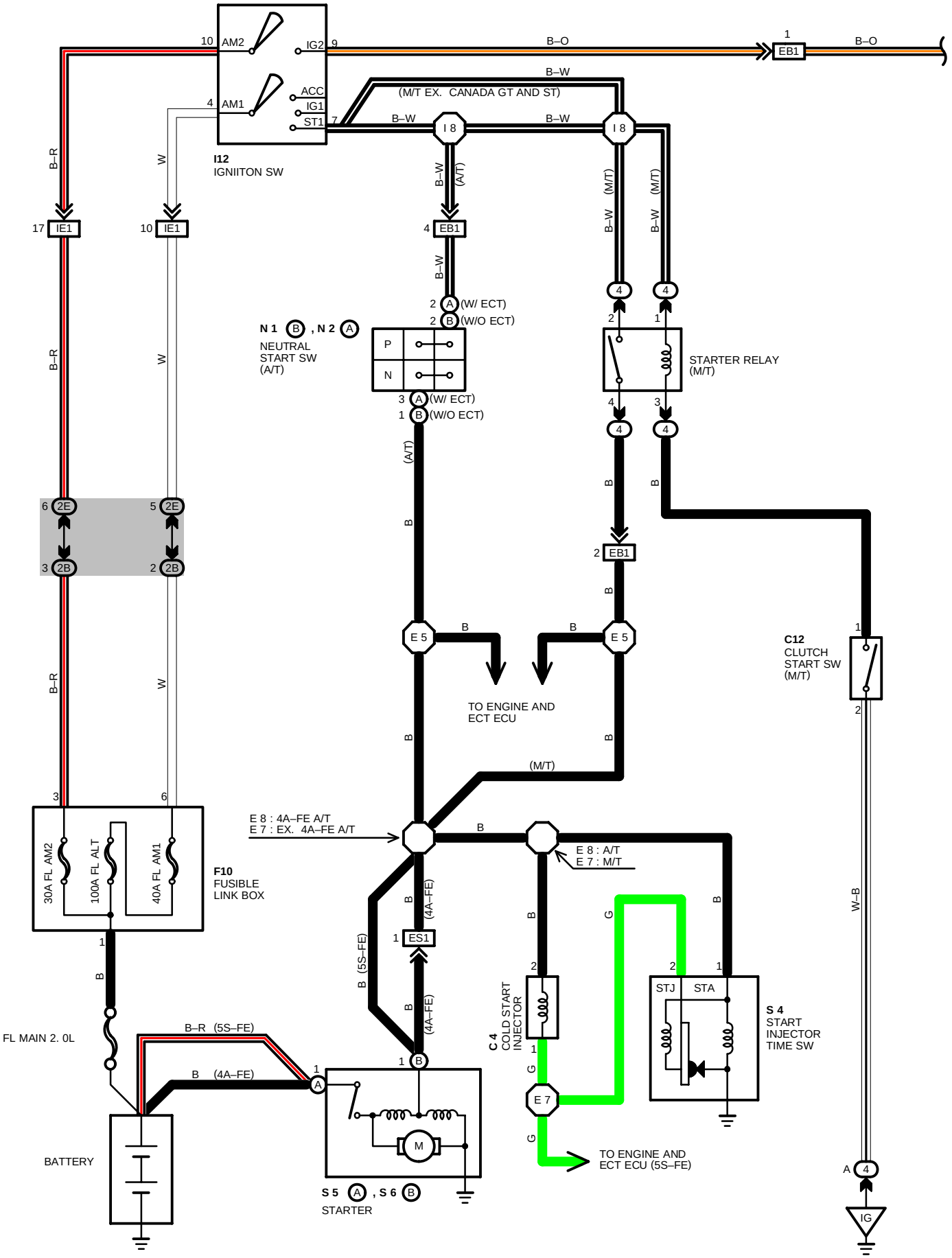


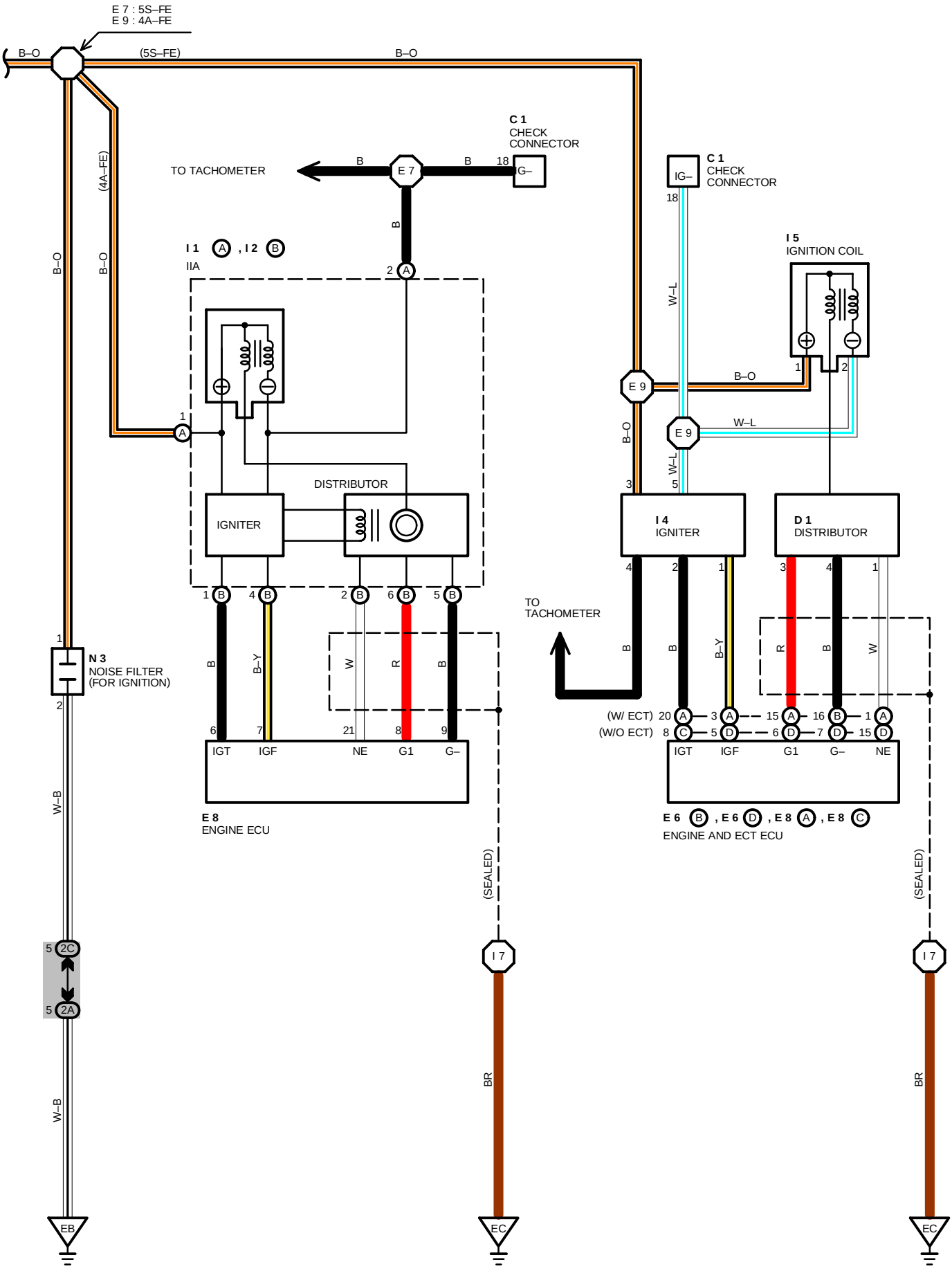
F10 (B) BLACK



I12 BLACK




I12
IGNIITON SW
AM2
AM1
IG2
ACC
IG1
ST1
B–O
B–W
(M/T EX. CANADA GT AND ST)
I 8
EB1
IE1
B–R
W
(A/T)
(M/T)
(W/ ECT)
(W/O ECT)
N 1 , N 2
NEUTRAL
START SW
(A/T)
P
N
STARTER RELAY
(M/T)
2E
2B
E 5
TO ENGINE AND
ECT ECU
C12
CLUTCH
START SW
(M/T)
E 8 : 4A–FE A/T
E 7 : EX. 4A–FE A/T
E 8 : A/T
E 7 : M/T
F10
FUSIBLE
LINK BOX
30A FL AM2
100A FL ALT
40A FL AM1
ES1
(4A–FE)
B (5S–FE)
C 4
COLD START
INJECTOR
STJ
STA
S 4
START
INJECTOR
TIME SW
G
W–B
FL MAIN 2. 0L
B–R (5S–FE)
B (4A–FE)
BATTERY
M
S 5 , S 6
STARTER
E 7
TO ENGINE AND
ECT ECU (5S–FE)
IG


E 7 : 5S–FE
E 9 : 4A–FE
B–O
(5S–FE)
B–O
(4A–FE)
B–O
B–O
C 1
CHECK
CONNECTOR
TO TACHOMETER
B
E 7
B
18
IG–
B
I 1 A , I 2 B
IIA
2 A
1
A
DISTRIBUTOR
IGNITER
1 B
4 B
2 B
6 B
5 B
B
B–Y
W
R
B
6
7
21
8
9
IGT
IGF
NE
G1
G–
E 8
ENGINE ECU
1
N 3
NOISE FILTER
(FOR IGNITION)
2
W–B
5 2C
5 2A
W–B
EB
(SEALED)
I 7
BR
EC
C 1
CHECK
CONNECTOR
IG–
18
W–L
I 5
IGNITION COIL
1
2
B–O
E 9
W–L
E 9
B–O
W–L
3
5
I 4
IGNITER
D 1
DISTRIBUTOR
TO
TACHOMETER
4
2
1
3
4
1
B
B
B–Y
R
B
W
(W/ ECT) 20 A 3 A 15 A 16 B 1 A
(W/O ECT) 8 C 5 D 6 D 7 D 15 D
IGT
IGF
G1
G–
NE
E 6 B , E 6 D , E 8 A , E 8 C
ENGINE AND ECT ECU
(SEALED)
I 7
BR
EC

STARTING AND IGNITION

SERVICE HINTS

I12 IGNITION SW
4–7 : CLOSED WITH IGNITION SW AT **ST** POSITION
9–10 : CLOSED WITH IGNITION SW AT **ON** OR **ST** POSITION

C12 CLUTCH START SW
1–2 : CLOSED WITH CLUTCH PEDAL FULLY DEPRESSED

STARTER RELAY
(4) 2–**(4)** 4 : CLOSED WITH CLUTCH START SW ON AND IGNITION SW AT **ST** POSITION

STARTER
POINTS CLOSED WITH CLUTCH START SW ON AND IGNITION SW AT **ST** POSITION

N 1, N 2 NEUTRAL START SW (A/T)
2–3 : CLOSED WITH A/T SHIFT LEVER IN **P** OR **N** POSITION (W/ ECT)
1–2 : CLOSED WITH A/T SHIFT LEVER IN **P** OR **N** POSITION (W/O ECT)

C 4 COLD START INJECTOR
1–2 : APPROX. **12** VOLTS WHILE START INJECTOR TIME SW IS CLOSED AND STARTER CRANKING

: PARTS LOCATION

CODE		SEE PAGE	CODE		SEE PAGE	CODE		SEE PAGE
C 1		26 (5S–FE), 27 (4A–FE)	**E 8**	A	29	**I12**		29
C 4		26 (5S–FE), 27 (4A–FE)		C	29	**N 1**	B	26 (5S–FE), 27 (4A–FE)
C12		28	**F10**		26 (5S–FE), 27 (4A–FE)	**N 2**	A	26 (5S–FE)
D 1		26 (5S–FE), 27 (4A–FE)	**I 1**	A	27 (4A–FE)	**N 3**		26 (5S–FE), 27 (4A–FE)
E 6	B	29	**I 2**	B	27 (4A–FE)	**S 4**		26 (5S–FE), 27 (4A–FE)
	A	29	**I 4**		26 (5S–FE)	**S 5**	A	26 (5S–FE), 27 (4A–FE)
E 8		29	**I 5**		26 (5S–FE)	**S 6**	B	26 (5S–FE), 27 (4A–FE)

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
4	24	R/B NO. 4 (RIGHT KICK PANEL)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
2A	20	ENGINE ROOM MAIN WIRE AND J/B NO.2 (NEAR THE BATTERY)
2B	20	ENGINE WIRE AND J/B NO.2 (NEAR THE BATTERY)
2C		
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO.2 (NEAR THE BATTERY)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EB1	32 (5S–FE)	ENGINE WIRE AND COWL WIRE (REAR SIDE OF RIGHT FRONT FENDER)
	34 (4A–FE)	
ES1	34 (4A–FE)	ENGINE WIRE AND ENGINE ROOM NO. 2 WIRE (NEAR THE STARTER)
IE1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)

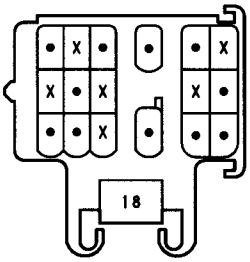
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EB	32 (5S–FE)	FRONT LEFT FENDER
	34 (4A–FE)	
EC	32 (5S–FE)	INTAKE MANIFOLD
	34 (4A–FE)	
IG	36	R/B NO. 4 SET BOLT

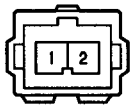
: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 5	32 (5S–FE)	ENGINE WIRE	**E 8**	34 (4A–FE)	ENGINE WIRE
	34 (4A–FE)		**E 9**	32 (5S–FE)	
E 7	32 (5S–FE)			34 (4A–FE)	
	34 (4A–FE)		**I 7**	36	
E 8	32 (5S–FE)		**I 8**	36	COWL WIRE

C 1 DARK GRAY



(5S-FE) C 4 BLACK



(4A-FE) C 4 BLACK



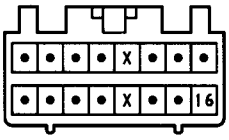
C12



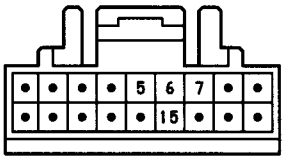
D 1 BLACK



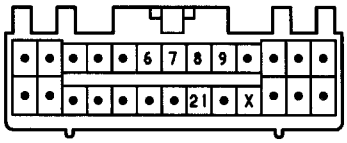
E 6 (B) DARK GRAY



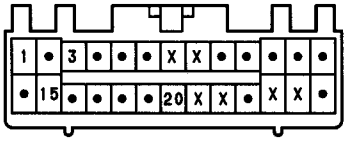
E 6 (D) DARK GRAY



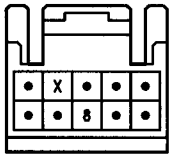
E 8 DARK GRAY



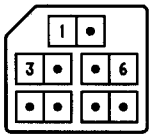
E 8 (A) DARK GRAY



E 8 (C) DARK GRAY



F10 BLACK



I 1 (A) DARK GRAY



I 2 (B) DARK GRAY



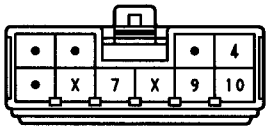
I 4 BLACK



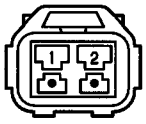
I 5 BLACK



I12 BLACK



N 1 (B) GRAY



N 2 (A) GRAY



N 3 GRAY



S 4 BROWN

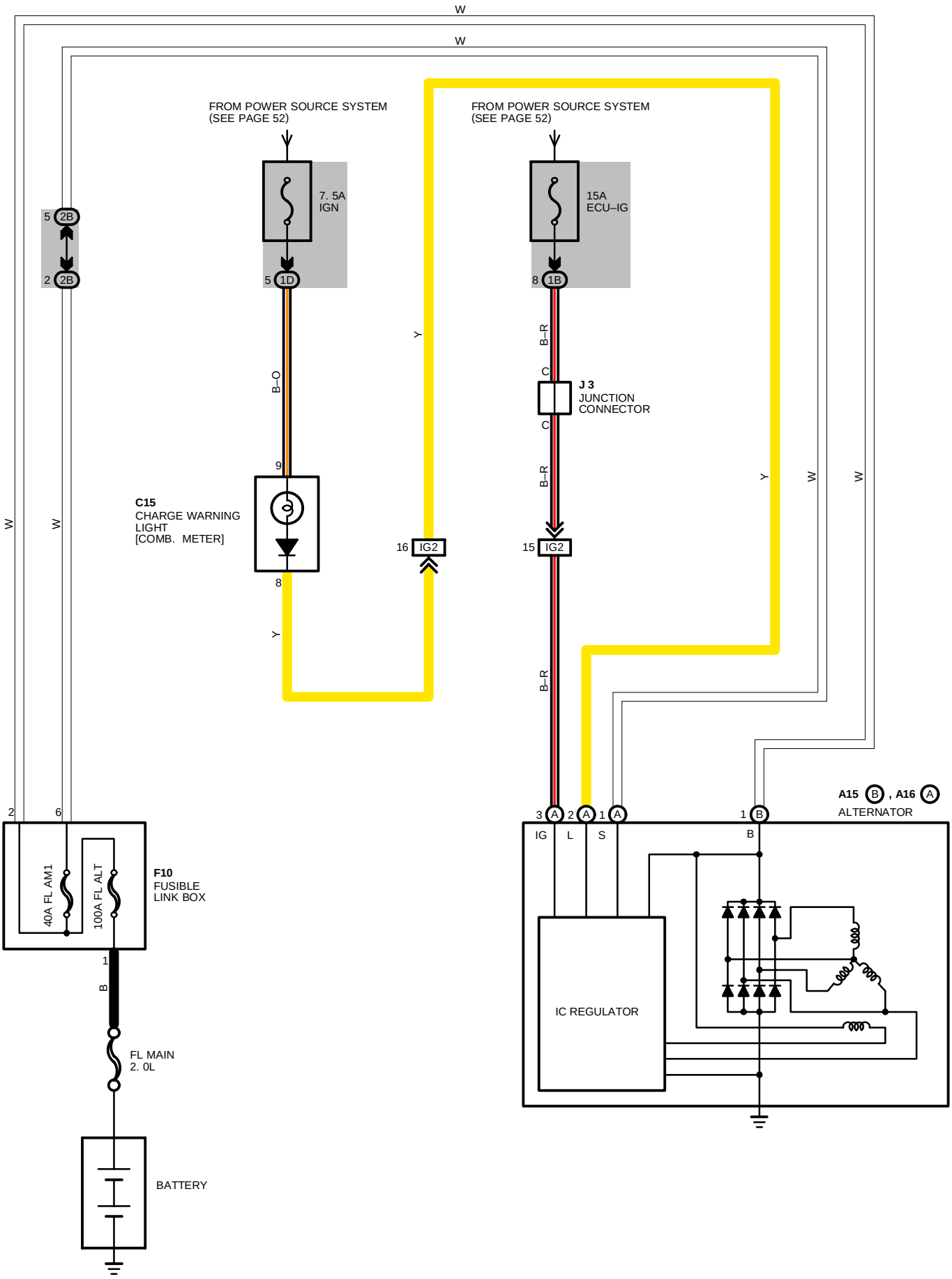


S 5 (A)



S 6 (B) BLACK




W
W
FROM POWER SOURCE SYSTEM
(SEE PAGE 52)
FROM POWER SOURCE SYSTEM
(SEE PAGE 52)
7. 5A
IGN
15A
ECU–IG
5 2B
2 2B
5 1D
8 1B
B–O
B–R
Y
C
J 3
JUNCTION
CONNECTOR
C
B–R
C15
CHARGE WARNING
LIGHT
[COMB. METER]
9
8
16 IG2
15 IG2
Y
W
W
W
B–R
2
6
3 A
2 A
1 A
1 B
A15 B , A16 A
ALTERNATOR
IG
L
S
B
40A FL AM1
100A FL ALT
F10
FUSIBLE
LINK BOX
1
B
IC REGULATOR
FL MAIN
2. 0L
BATTERY

SERVICE HINTS

A16(A) ALTERNATOR

(A) 1–GROUND: **13.9–15.1** VOLTS WITH ENGINE RUNNING AT **2000** RPM AND **25**°C (**77**°F)
13.5–14.3 VOLTS WITH ENGINE RUNNING AT **2000** RPM AND **115**°C (**239**°F)
(A) 2–GROUND: **0–4** VOLTS WITH IGNITION SW AT **ON** POSITION AND ENGINE NOT RUNNING

: PARTS LOCATION

CODE		SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A15	B	26 (5S–FE), 27 (4A–FE)	**C15**	28	**J 3**	29
A16	A	26 (5S–FE), 27 (4A–FE)	**F10**	26 (5S–FE), 27 (4A–FE)		

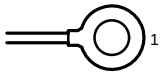
: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1D		
2B	20	ENGINE WIRE AND J/B NO. 2 (NEAR THE BATTERY)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IG2	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU))

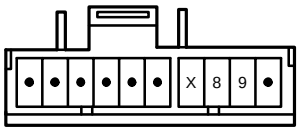
A15 (B)



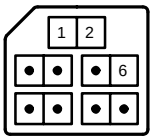
A16 (A) BLACK



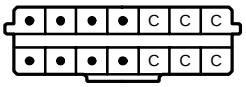
C15 GRAY



F10 BLACK



J 3



(HINT : SEE PAGE 7)

SYSTEM OUTLINE

THE ENGINE CONTROL SYSTEM UTILIZES A MICROCOMPUTER AND MAINTAINS OVERALL CONTROL OF THE ENGINE, TRANSMISSION, ETC. AN OUTLINE OF ENGINE CONTROL IS GIVEN HERE.

1. INPUT SIGNALS

(1) WATER TEMP. SIGNAL SYSTEM

THE WATER TEMP. SENSOR DETECTS THE ENGINE COOLANT TEMP. AND HAS A BUILT–IN THERMISTOR WITH A RESISTANCE WHICH VARIES ACCORDING TO THE WATER TEMP. THUS THE WATER TEMP. IS INPUT IN THE FORM OF A CONTROL SIGNAL TO **TERMINAL THW** OF THE ECU.

(2) INTAKE AIR TEMP. SIGNAL SYSTEM

THE INTAKE AIR TEMP. SENSOR IS DETECTS THE INTAKE AIR TEMP., WHICH IS INPUT AS A CONTROL SIGNAL TO **TERMINAL THA** OF THE ECU.

(3) OXYGEN SENSOR SIGNAL SYSTEM

THE OXYGEN DENSITY IN THE EXHAUST EMISSIONS IS DETECTED AND INPUT AS A CONTROL SIGNAL TO **TERMINAL OX1** AND **OX2** (CALIFORNIA) OF THE ECU.

(4) RPM SIGNAL SYSTEM

CRANKSHAFT POSITION AND ENGINE RPM ARE DETECTED BY THE PICK–UP COIL INSTALLED INSIDE THE DISTRIBUTOR. CRANKSHAFT POSITION IS INPUT AS A CONTROL SIGNAL TO **TERMINAL G1,** OF THE ECU, AND RPM IS INPUT TO **TERMINAL NE**.

(5) THROTTLE SIGNAL SYSTEM

THE THROTTLE POSITION SENSOR DETECTS THE THROTTLE VALVE OPENING ANGLE, WHICH IS INPUT AS A CONTROL SIGNAL TO **TERMINAL PSW** OF THE ECU, OR WHEN THE VALVE IS FULLY CLOSED, TO **TERMINAL IDL**.

(6) VEHICLE SPEED SIGNAL SYSTEM

THE SPEED SENSOR, INSTALLED INSIDE THE COMBINATION METER, DETECTS THE VEHICLE SPEED AND INPUTS A CONTROL SIGNAL TO **TERMINAL SPD** OF THE ECU.

(7) NEUTRAL START SW SIGNAL SYSTEM

THE NEUTRAL START SW DETECTS WHETHER THE SHIFT POSITION IS IN NEUTRAL OR NOT, AND INPUTS A CONTROL SIGNAL TO **TERMINAL NSW** OF THE ECU.

(8) A/C SW SIGNAL SYSTEM

THE OPERATING VOLTAGE OF THE A/C MAGNET CLUTCH IS DETECTED AND INPUT IN THE FORM OF A CONTROL SIGNAL TO **TERMINAL A/C1** OF THE ECU, AND OPERATION A/C IDLE–UP VSV IS DETECTED AND INPUT IN THE FORM OF A CONTROL SIGNAL TO **TERMINAL ACA** OF THE ECU.

(9) BATTERY SIGNAL SYSTEM

VOLTAGE IS CONSTANTLY APPLIED TO **TERMINAL BATT** OF THE ECU. WHEN THE IGNITION SW IS TURNED TO ON, VOLTAGE FOR ECU OPERATION IS APPLIED VIA THE EFI MAIN RELAY TO **TERMINALS +B** AND **+B1** OF THE ECU.

(10) INTAKE AIR VOLUME SIGNAL SYSTEM

INTAKE AIR VOLUME IS DETECTED BY THE VACUUM SENSOR AND IS INPUT AS A CONTROL SIGNAL TO **TERMINAL PIM** OF THE ECU.

(11) STA SIGNAL SYSTEM

TO CONFIRM THAT THE ENGINE IS CRANKING, THE VOLTAGE APPLIED TO THE STARTER MOTOR DURING CRANKING IS DETECTED AND IS INPUT AS A CONTROL SIGNAL TO **TERMINAL STA** OF THE ECU.

(12) ELECTRICAL LOAD SIGNAL SYSTEM

THE SIGNAL WHEN SYSTEMS SUCH AS THE REAR WINDOW DEFOGGER, HEADLIGHTS, ETC. WHICH CAUSE A HIGH ELECTRICAL BURDEN ARE ON IS INPUT TO **TERMINAL ELS** AS A CONTROL SIGNAL.

2. CONTROL SYSTEM

***** EFI (ELECTRONIC FUEL INJECTION) SYSTEM

THE EFI SYSTEM MONITORS THE ENGINE REVOLUTIONS THROUGH THE SIGNALS EACH SENSOR (INPUT SIGNALS (1) TO (12)) INPUTS TO THE ECU. BASED ON THIS DATA AND THE PROGRAM MEMORIZED IN THE ECU, THE MOST APPROPRIATE FUEL INJECTION TIMING IS DECIDED AND CURRENT IS OUTPUT TO **TERMINALS #10** AND **#20** OF THE ECU, CAUSING THE INJECTORS TO OPERATE (TO INJECT FUEL). IT IS THIS SYSTEM WHICH, THROUGH THE WORK OF THE ECU, FINELY CONTROLS FUEL INJECTION IN RESPONSE TO DRIVING CONDITIONS.

DURING ENGINE CRANKING (SIGNAL INPUT TO **TERMINAL STA**) OR FOR APPROX. **2** SECONDS AFTER NE SIGNAL INPUT, ECU OPERATION ENERGIZES (POINT CLOSED) THE FUEL PUMP CIRCUIT INSIDE THE CIRCUIT OPENING RELAY, CAUSING THE FUEL PUMP TO OPERATE.

***** ESA (ELECTRONIC SPARK ADVANCE) SYSTEM

THE ESA SYSTEM MONITORS THE ENGINE REVOLUTIONS USING THE SIGNALS (INPUT SIGNALS (1, 4, 5, 10, 11)) INPUT TO THE ECU FROM EACH SENSOR. BASED ON THIS DATA AND THE PROGRAM MEMORIZED IN THE ECU, THE MOST APPROPRIATE IGNITION TIMING IS DECIDED AND CURRENT IS OUTPUT TO **TERMINAL IGT** OF THE ECU. THIS OUTPUT CONTROLS THE IGNITER TO PRODUCE THE MOST APPROPRIATE IGNITION TIMING FOR THE DRIVING CONDITIONS.

* ISC (IDLE CONTROL) SYSTEM

THE ISC SYSTEM (ROTARY SOLENOID TYPE) INCREASES THE RPM AND PROVIDES IDLING STABILITY FOR FAST IDLE–UP WHEN THE ENGINE IS COLD AND WHEN THE IDLE SPEED HAS DROPPED DUE TO ELECTRICAL LOAD, ETC. THE ECU EVALUATES THE SIGNALS FROM EACH SENSOR (INPUT SIGNALS (1, 4 TO 8, 11, 12)), OUTPUTS CURRENT TO **TERMINAL TSCO** AND **ISCC,** AND CONTROLS THE ISC VALVE.

* EGR CONTROL SYSTEM

THE EGR CUT CONTROL SYSTEM CONTROLS THE VSV (FOR EGR) BY EVALUATING THE SIGNALS FROM EACH SENSOR INPUT TO THE ECU (INPUT SIGNALS (1, 5, 6, 9)) AND BY SENDING OUTPUT TO **TERMINAL EGR** OF THE ECU.

* A/C CUT CONTROL SYSTEM

WHEN THE VEHICLE SUDDENLY ACCELERATES FROM LOW ENGINE SPEED, THIS SYSTEM CUTS OFF AIR CONDITIONER OPERATION FOR A FIXED PERIOD OF TIME IN RESPONSE TO THE VEHICLE SPEED AND THROTTLE VALVE OPENING ANGLE IN ORDER TO MAINTAIN ACCELERATION PERFORMANCE.

THE ECU RECEIVES INPUT SIGNALS (5, 6), AND OUTPUTS SIGNALS TO **TERMINAL ACT**.

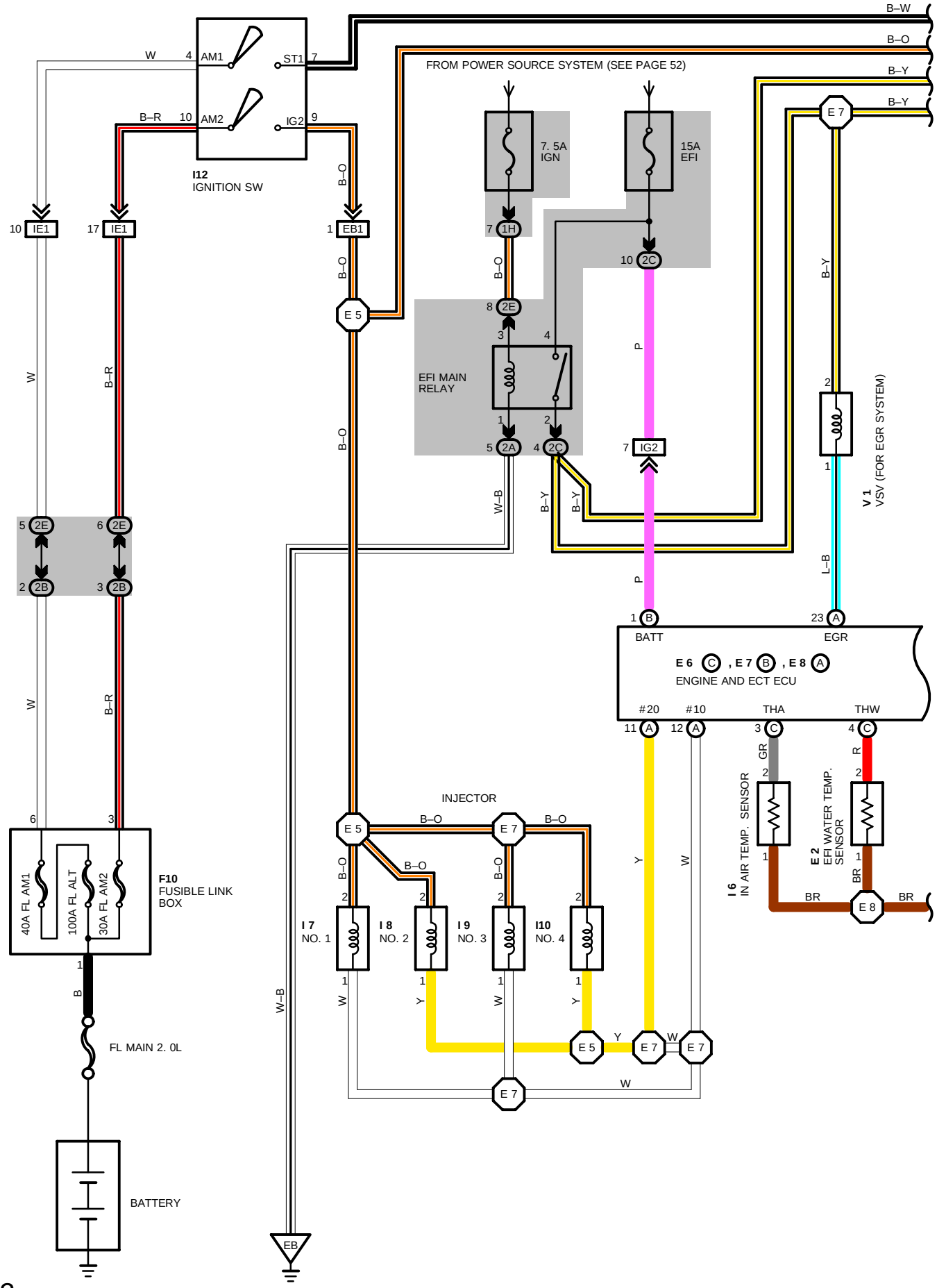
3. DIAGNOSIS SYSTEM

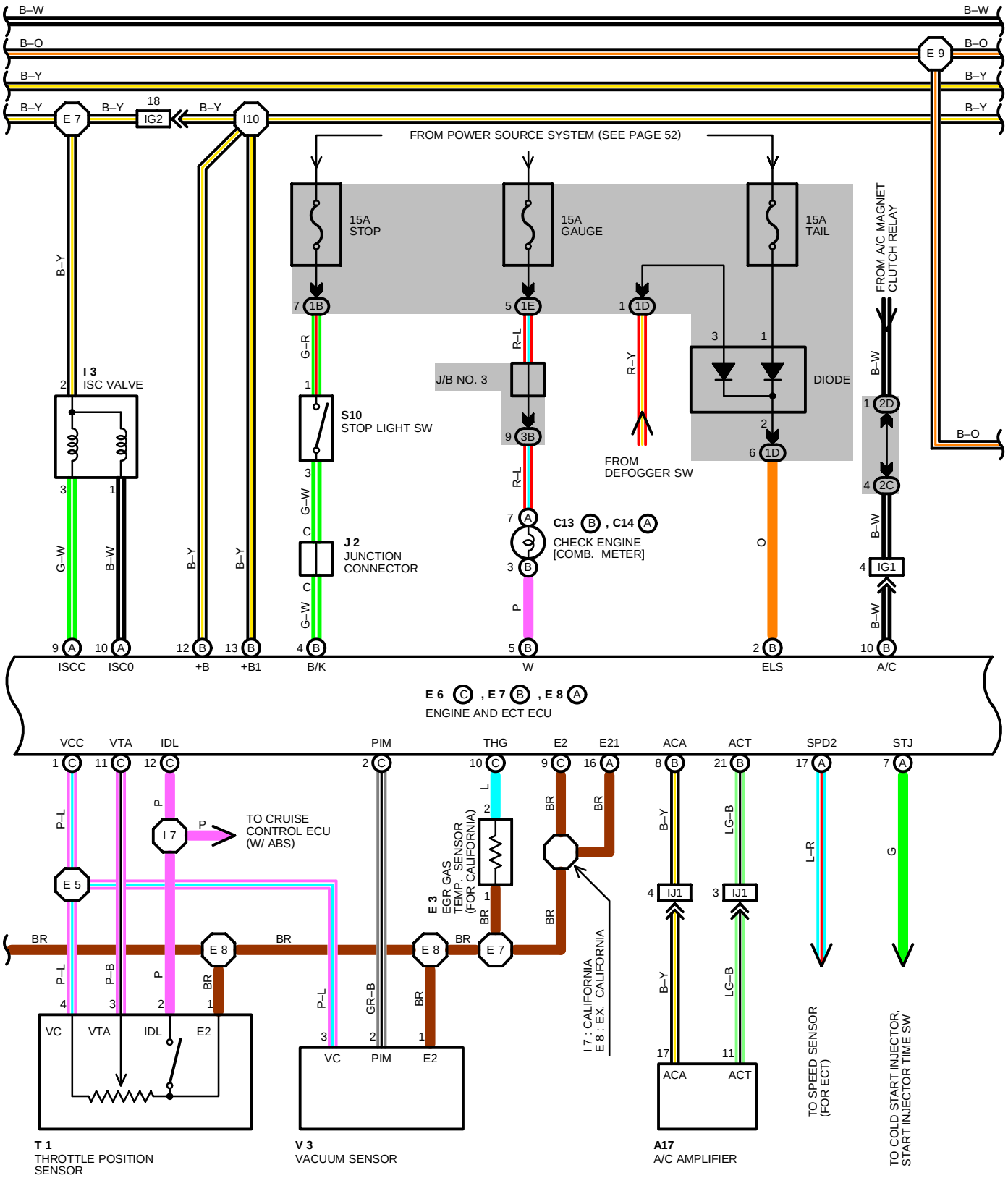
WITH THE DIAGNOSIS SYSTEM, WHEN THERE IS A MALFUNCTIONING IN THE ECU SIGNAL SYSTEM, THE MALFUNCTION SYSTEM IS RECORDED IN THE MEMORY. THE MALFUNCTIONING SYSTEM CAN THEN BE FOUND BY READING THE DISPLAY (CODE) OF THE CHECK ENGINE WARNING LIGHT.

4. FAIL–SAFE SYSTEM

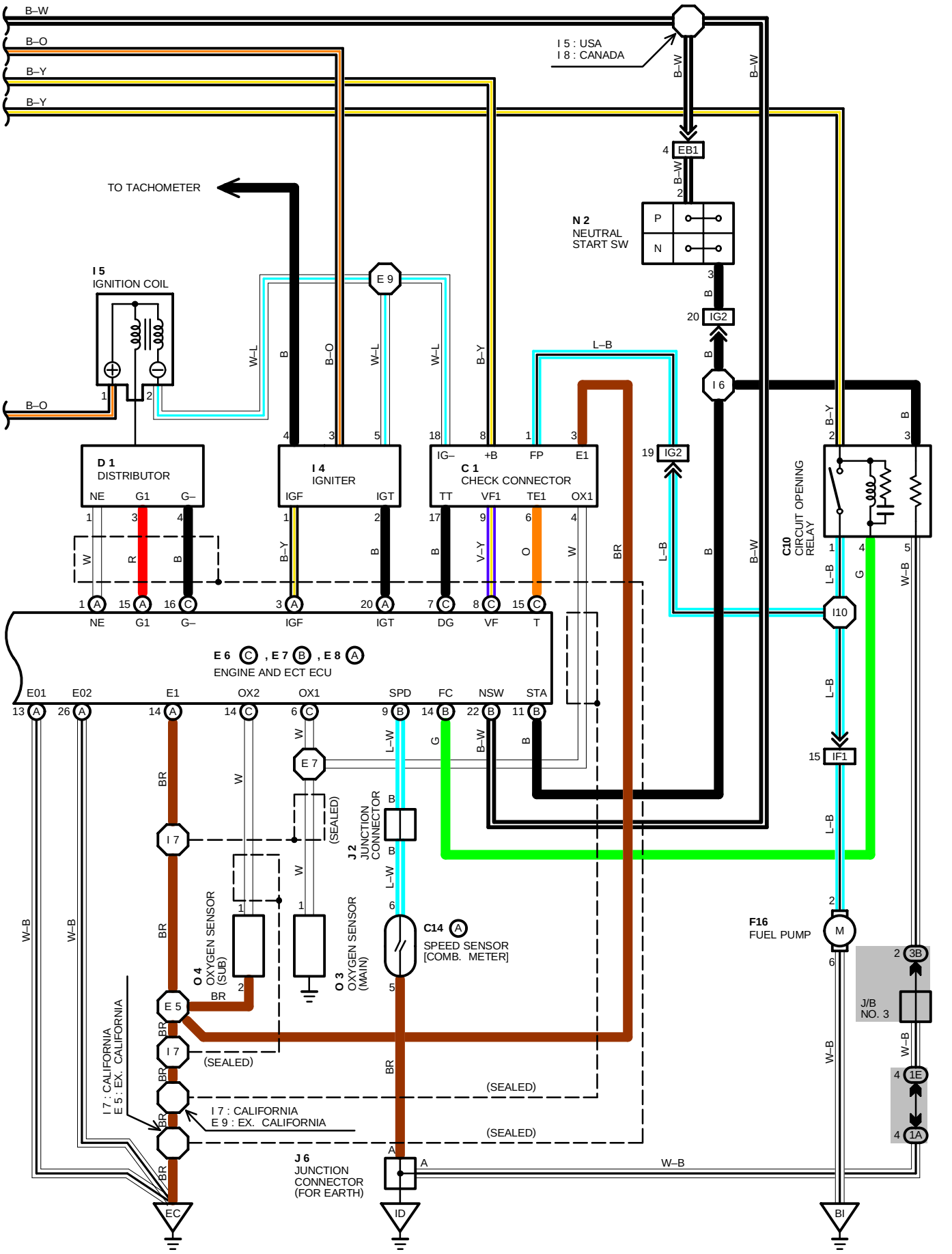
WHEN A MALFUNCTION OCCURS IN ANY SYSTEM, IF THERE IS A POSSIBILITY OF ENGINE TROUBLE BEING CAUSED BY CONTINUED CONTROL BASED ON THE SIGNALS FROM THAT SYSTEM, THE FAIL–SAFE SYSTEM EITHER CONTROLS THE SYSTEM BY USING DATA (STANDARD VALUES) RECORDED IN THE ECU MEMORY OR ELSE STOPS THE ENGINE.

ENGINE CONTROL (5S–FE w/ ECT)

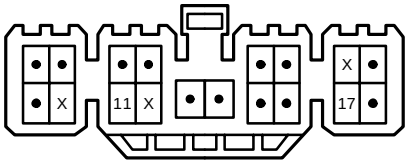



B–W
B–O
B–Y
E 7
IG2
I10
E 9
FROM POWER SOURCE SYSTEM (SEE PAGE 52)
15A STOP
15A GAUGE
15A TAIL
FROM A/C MAGNET CLUTCH RELAY
I 3
ISC VALVE
S10
STOP LIGHT SW
J/B NO. 3
DIODE
FROM DEFOGGER SW
J 2
JUNCTION CONNECTOR
C13 B , C14 A
CHECK ENGINE [COMB. METER]
IG1
ISCC
ISC0
+B
+B1
B/K
W
ELS
A/C
E 6 C , E 7 B , E 8 A
ENGINE AND ECT ECU
VCC
VTA
IDL
PIM
THG
E2
E21
ACA
ACT
SPD2
STJ
I 7
TO CRUISE CONTROL ECU (W/ ABS)
E 5
E 8
E 3
EGR GAS TEMP. SENSOR (FOR CALIFORNIA)
E 7
I 7 : CALIFORNIA
E 8 : EX. CALIFORNIA
IJ1
TO SPEED SENSOR (FOR ECT)
TO COLD START INJECTOR, START INJECTOR TIME SW
T 1
THROTTLE POSITION SENSOR
V 3
VACUUM SENSOR
A17
A/C AMPLIFIER

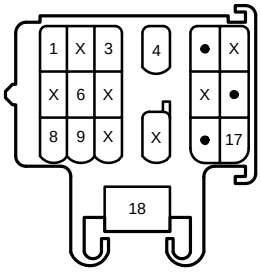
ENGINE CONTROL (5S–FE w/ ECT)



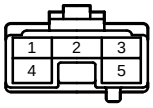
A17



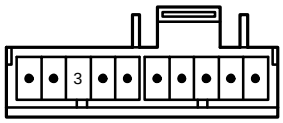
C 1 DARK GRAY



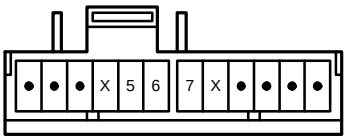
C10 GRAY



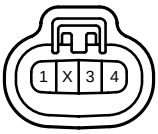
C13 (B) BROWN



C14 (A)



D 1 BLACK



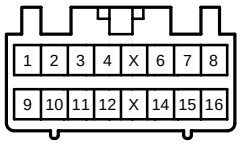
E 2 GREEN



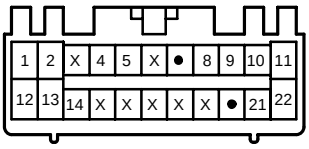
E 3 GRAY



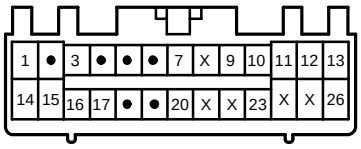
E 6 (C) DARK GRAY



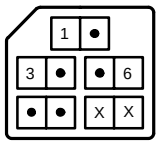
E 7 (B) DARK GRAY



E 8 (A) DARK GRAY



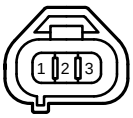
F10 BLACK



F16 DARK GRAY



I 3 GRAY



I 4 BLACK



I 5 BLACK



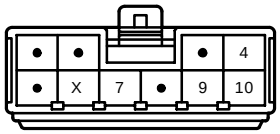
I 6 BLACK



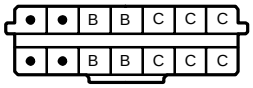
I 7, I 8, I 9, I10 GRAY



I12 BLACK

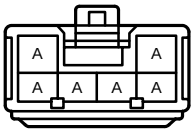


J 2



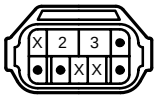
(HINT : SEE PAGE 7)

J 6



(HINT : SEE PAGE 7)

N 2 GRAY



O 3 DARK GRAY



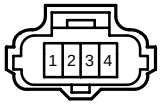
O 4 DARK GRAY



S10



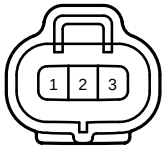
T 1 BLACK



V 1 BLUE



V 3 BLACK



ENGINE CONTROL (5S–FE w/ ECT)

SERVICE HINTS

E 6, E7, E8 ENGINE ECU

VOLTAGE AT ECU WIRING CONNECTORS

BATT–E1	:	ALWAYS **10.0–14.0** VOLTS
+B–E1	:	**10–14.0** VOLTS (IGNITION SW AT **ON** POSITION)
+B1–E1	:	**10–14.0** VOLTS (IGNITION SW AT **ON** POSITION)
IDL–E2	:	**8.0–14.0** VOLTS (IGNITION SW ON AND THROTTLE VALVE OPEN)
VC–E2	:	**4.5–5.5** VOLTS (IGNITION SW AT **ON** POSITION)
VTA–E2	:	**0.8–1.2** VOLTS (IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED)
	:	**3.2–4.2** VOLTS (IGNITION SW ON AND THROTTLE VALVE OPEN)
PIM–E2	:	**3.3–3.9** VOLTS (IGNITION SW AT **ON** POSITION)
VCC–E2	:	**4.5–5.5** VOLTS (IGNITION SW AT **ON** POSITION)
#10, #20 – E01, E02	:	**10–14.0** VOLTS (IGNITION SW AT **ON** POSITION)
THA–E2	:	**1.9–2.9** VOLTS (IGNITION SW ON AND INTAKE AIR TEMP. **20**˚C, **68**˚F)
THW–E2	:	**0.1–1.1** VOLTS (IGNITION SW ON AND COOLANT TEMP. **80**˚C, **176**˚F)
STA–E1		**6.0–14.0** VOLTS (ENGINE CRANKING)
IGT–E1		**0.8–1.2** VOLTS (ENGINE CRANKING OR IDLING)
W–E1		**8.0–14.0** VOLTS (NO TROUBLE AND ENGINE RUNNING)
A/C–E1	:	**8.0–14.0** VOLTS (IGNITION SW ON AND AIR CONDITIONING ON)
ACT–E1	:	**4.5–5.5** VOLTS (IGNITION SW ON AND AIR CONDITIONING ON)
ACA–E1		**2.0** VOLTS OR LESS (IGNITION SW ON AND AIR CONDITIONING ON)
T–E1	:	**10–14.0** VOLTS (IGNITION SW ON AND CHECK CONNECTOR **TE1–E1** NOT CONNECTED)
	:	**1.0** VOLTS OR LESS (IGNITION SW ON AND CHECK CONNECTOR **TE1–E1** CONNECTED)
NSW–E1	:	**0–2.0** VOLTS (IGNITION SW ON AND NEUTRAL START SW POSITION **P** OR **N** RANGE)
	:	**6.0–14.0** VOLTS (IGNITION SW ON AND EX. NEUTRAL START SW POSITION **P** OR **N** RANGE)
B/K–E1	:	**10–14.0** VOLTS (BRAKE PEDAL DEPRESSED)

RESISTANCE AT ECU WIRING CONNECTORS

(DISCONNECT WIRING CONNECTOR)

IDL–E2	:	INFINITY (THROTTLE VALVE OPEN)
		2.3 KΩ OR LESS (THROTTLE VALVE FULLY CLOSED)
VTA–E2	:	**3.3–10.0** KΩ (THROTTLE VALVE FULLY OPEN)
		0.2–0.8 KΩ (THROTTLE VALVE FULLY CLOSED)
VC–E2	:	**3.0–7.0** KΩ
THA–E2	:	**2.0–3.0** KΩ (INTAKE AIR TEMP. **20**˚C, **68**˚F)
THW–E2	:	**0.2–0.4** KΩ (COOLANT TEMP. **80**˚C, **176**˚F)
G1, NE – G–	:	**0.17–0.21** KΩ
ISCC, ISCO–+B, +B1	:	**19.3–22.3** Ω

: PARTS LOCATION

CODE		SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A17		28	**F10**	26 (5S–FE)	**J 2**	29
C 1		26 (5S–FE)	**F16**	30 (L/B), 31 (C/P)	**J 6**	29
C10		28	**I 3**	26 (5S–FE)	**N 2**	26 (5S–FE)
C13	B	28	**I 4**	26 (5S–FE)	**O 3**	26 (5S–FE)
C14	A	28	**I 5**	26 (5S–FE)	**O 4**	26 (5S–FE)
D 1		26 (5S–FE)	**I 6**	26 (5S–FE)	**S10**	29
E 2		26 (5S–FE)	**I 7**	26 (5S–FE)	**T 1**	26 (5S–FE)
E 3		26 (5S–FE)	**I 8**	26 (5S–FE)	**V 1**	26 (5S–FE)
E 6	C	29	**I 9**	26 (5S–FE)	**V 3**	26 (5S–FE)
E 7	B	29	**I10**	26 (5S–FE)		
E 8	A	29	**I12**	29		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1B		
1D		
1E		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2A	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2B	20	ENGINE WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2C		
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
3B	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EB1	32 (5S–FE)	ENGINE WIRE AND COWL WIRE (REAR SIDE OF RIGHT FRONT FENDER)
IE1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
IG2	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)
IJ1	36	COWL WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)

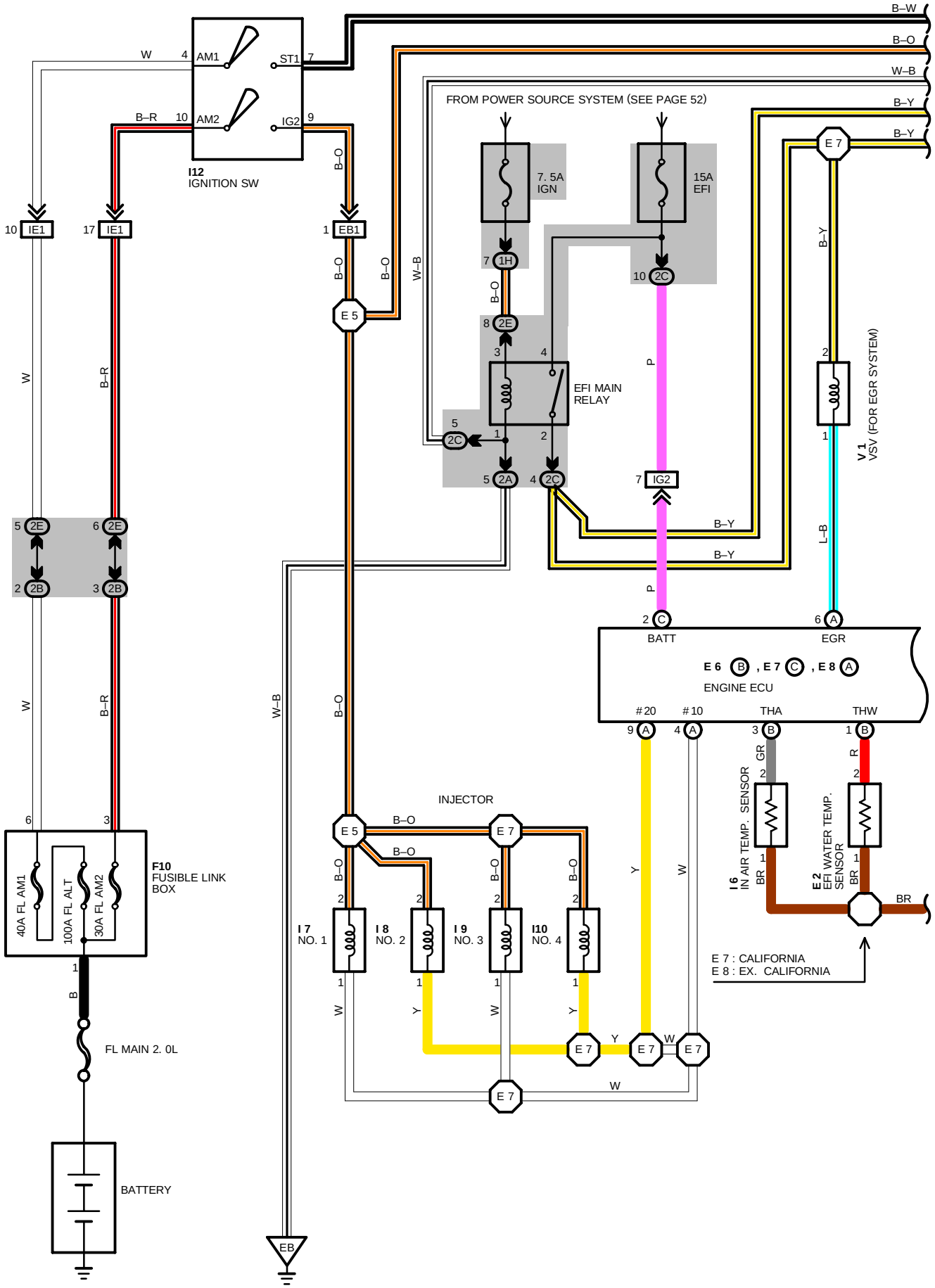
: GROUND POINTS

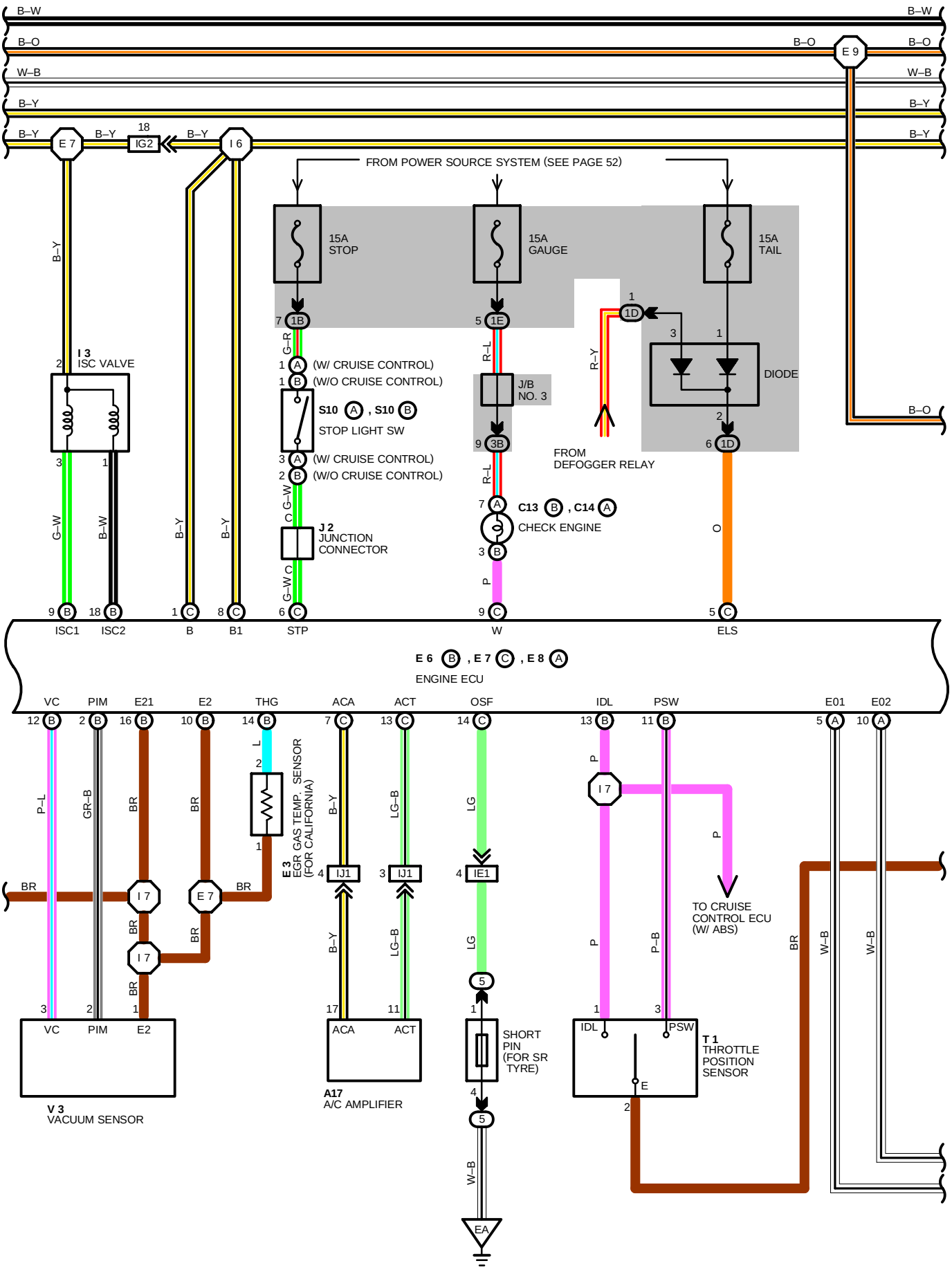
CODE	SEE PAGE	GROUND POINTS LOCATION
EB	32 (5S–FE)	FRONT LEFT FENDER
EC	32 (5S–FE)	INTAKE MANIFOLD
ID	36	LEFT KICK PANEL
BI	38 (L/B)	UNDER THE LEFT CENTER PILLAR

: SPLICE POINTS

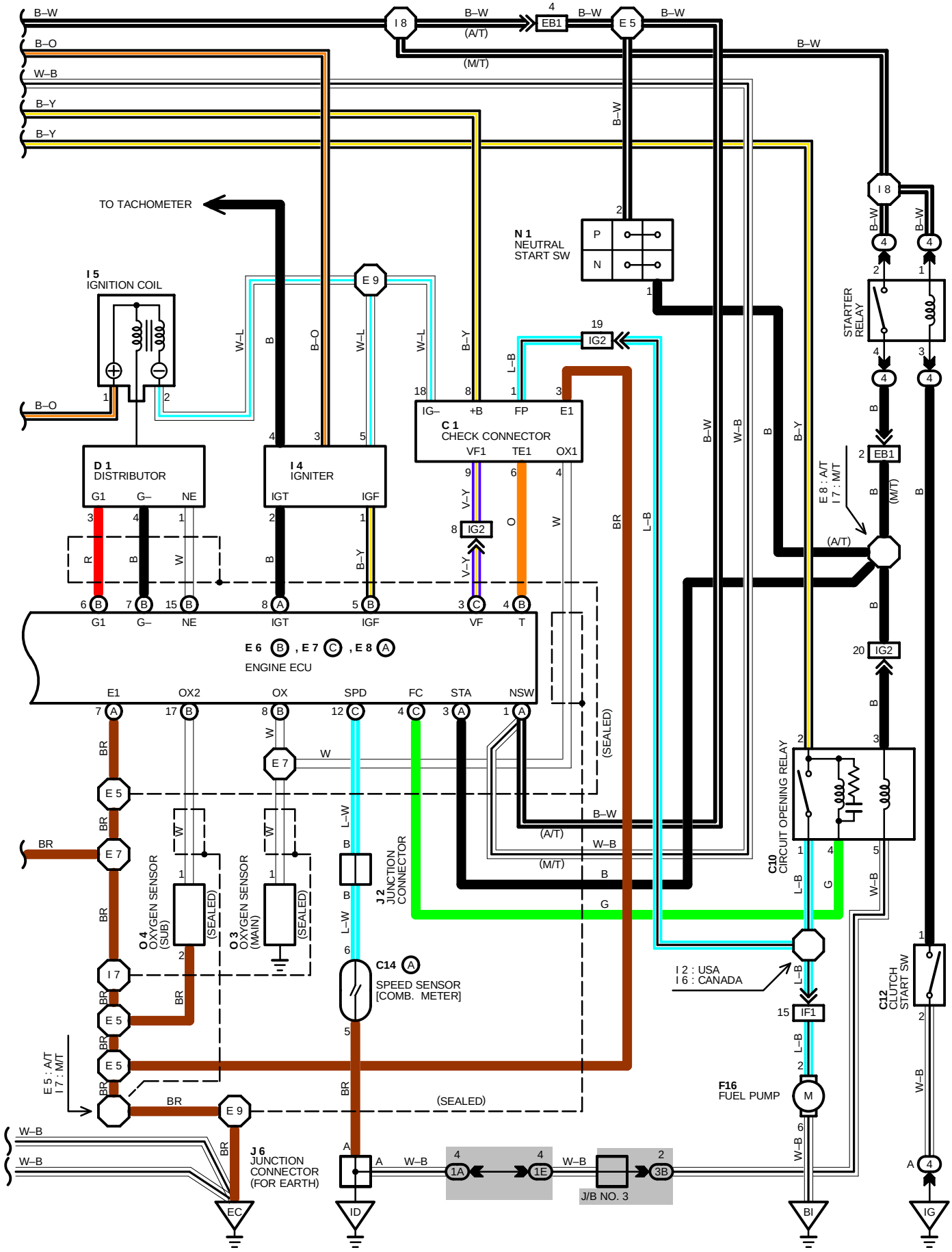
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 5	32 (5S–FE)	ENGINE WIRE	**I 6**	36	COWL WIRE
E 7			**I 7**	36	ENGINE WIRE
E 8			**I 8**	36	COWL WIRE
E 9			**I10**	36	CONSOLE BOX WIRE
I 5	36	COWL WIRE			

ENGINE CONTROL (5S–FE w/o ECT)

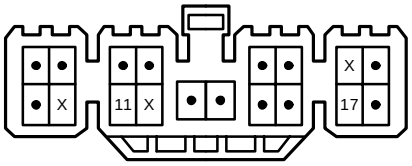



B–W
B–O
W–B
B–Y
E 9
E 7
IG2
I 6
FROM POWER SOURCE SYSTEM (SEE PAGE 52)
15A STOP
15A GAUGE
15A TAIL
I 3 ISC VALVE
(W/ CRUISE CONTROL)
(W/O CRUISE CONTROL)
S10 , S10
STOP LIGHT SW
J 2 JUNCTION CONNECTOR
J/B NO. 3
DIODE
FROM DEFOGGER RELAY
C13 , C14
CHECK ENGINE
ISC1
ISC2
B
B1
STP
W
ELS
E 6 , E 7 , E 8
ENGINE ECU
VC
PIM
E21
E2
THG
ACA
ACT
OSF
IDL
PSW
E01
E02
E3 EGR GAS TEMP. SENSOR (FOR CALIFORNIA)
I J1
I E1
I 7
E 7
SHORT PIN (FOR SR TYRE)
TO CRUISE CONTROL ECU (W/ ABS)
T 1 THROTTLE POSITION SENSOR
V 3 VACUUM SENSOR
A17 A/C AMPLIFIER
EA

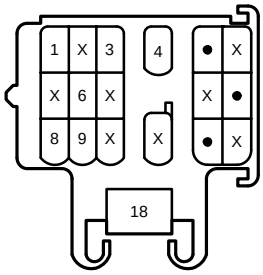
ENGINE CONTROL (5S–FE w/o ECT)



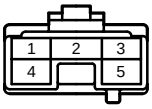
A17



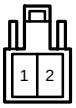
C 1 DARK GRAY



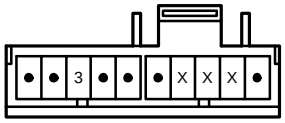
C10 DARK GRAY



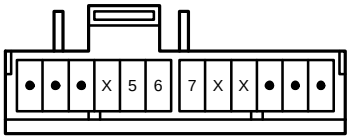
C12



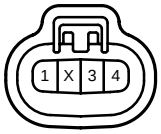
C13 (B) BROWN



C14 (A)



D 1 BLACK



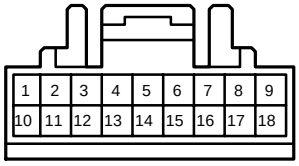
E 2 GREEN



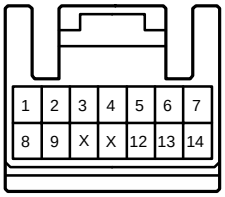
E 3 GRAY



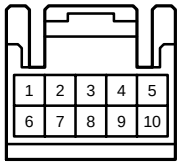
E 6 (B) DARK GRAY



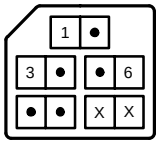
E 7 (C) DARK GRAY



E 8 (A) DARK GRAY



F10 BLACK



F16 DARK GRAY



I 3 GRAY



I 4 BLACK



I 5 BLACK



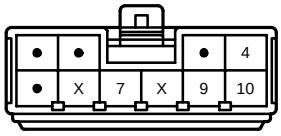
I 6 BLACK



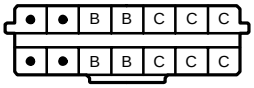
I 7, I 8
I 9, I10 GRAY



I12

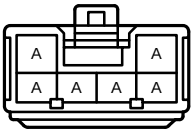


J 2



(HINT : SEE PAGE 7)

J 6



(HINT : SEE PAGE 7)

N 1 GRAY



O 3 DARK GRAY



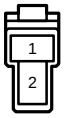
O 4 DARK GRAY



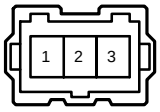
S10 (A) BLACK



S10 (B)



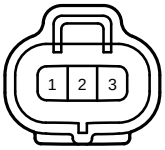
T 1 BLACK



V 1 BLUE



V 3 BLACK



ENGINE CONTROL (5S–FE w/o ECT)

SERVICE HINTS

E 6, E 7, E 8 ENGINE ECU

VOLTAGE AT ECU WIRING CONNECTORS

BATT–E1	:	ALWAYS **10.0–14.0** VOLTS
+B–E1	:	**10.0–14.0** VOLTS (IGNITION SW AT **ON** POSITION)
+B1–E1	:	**10.0–14.0** VOLTS (IGNITION SW AT **ON** POSITION)
IDL–E1	:	**8.0–14.0** VOLTS (IGNITION SW ON AND THROTTLE VALVE OPEN)
PSW–E1	:	**4.5–5.5** VOLTS (IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED)
PIM–E2	:	**3.3–3.9** VOLTS (IGNITION SW AT **ON** POSITION)
VCC–E2	:	**4.5–5.5** VOLTS (IGNITION SW AT **ON** POSITION)
#10, #20 – E01, E02	:	**10.0–14.0** VOLTS (IGNITION SW AT **ON** POSITION)
THA–E2	:	**1.9–2.9** VOLTS (IGNITION SW ON AND INTAKE AIR TEMP. **20**˚C, **68**˚F)
THW–E2	:	**0.1–1.1** VOLTS (IGNITION SW ON AND COOLANT TEMP. **80**˚C, **176**˚F)
STA–E1	:	**6.0–14.0** VOLTS (ENGINE CRANKING)
IGT–E1	:	**0.8–1.2** VOLTS (ENGINE CRANKING OR IDLING)
ISCC, ISCO–E1	:	**8.0–14.0** VOLTS (IGNITION SW AT **ON** POSITION)
W–E1	:	**10.0–14.0** VOLTS (IGNITION SW ON, NO TROUBLE AND ENGINE RUNNING)
A/C–E1	:	**8.0–14.0** VOLTS (IGNITION SW ON AND AIR CONDITIONING ON)
ACT–E1	:	**4.5–5.5** VOLTS (IGNITION SW ON AND AIR CONDITIONING ON)
ACA–E1	:	**2.0** VOLTS OR LESS (IGNITION SW ON AND AIR CONDITIONING ON)
T–E1	:	**10.0–14.0** VOLTS (IGNITION SW ON AND CHECK CONNECTOR **TE–E1** NOT CONNECTED)
	:	**1.0** VOLTS OR LESS (IGNITION SW ON AND CHECK CONNECTOR **TE–E1** CONNECTOR)
NSW–E1	:	**0–2.0** VOLTS (IGNITION SW ON AND NEUTRAL START SW POSITION **P** OR **N** RANGE)
		6.0–14.0 VOLTS (IGNITION SW ON AND EX. NEUTRAL START SW POSITION **P** OR **N** RANGE)
B/K–E1	:	**10.0–14.0** VOLTS (STOP LIGHT SW ON)

RESISTANCE AT ECU WIRING CONNECTORS

(DISCONNECT WIRING CONNECTOR)

IDL–E1	:	INFINITY (THROTTLE VALVE OPEN)
		0 Ω (THROTTLE VALVE FULLY CLOSED)
PSW–E1	:	**0** Ω (THROTTLE VALVE FULLY OPEN)
		INFINITY (THROTTLE VALVE FULLY CLOSED)
THA–E2	:	**2.0–3.0** KΩ (INTAKE AIR TEMP. **20**˚C, **68**˚F)
THW–E2	:	**0.2–0.4** KΩ (COOLANT TEMP. **80**˚C, **176**˚F)
G1 – G–	:	**0.17–0.21** KΩ
ISCC, ISCO–+B, +B1	:	**19.3–22.3** KΩ

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A17	28	**E 8** A	29	**I12**	29
C 1	26 (5S–FE)	**F10**	26 (5S–FE)	**J 2**	29
C10	28	**F16**	30 (L/B), 31 (C/P)	**J 6**	29
C12	28	**I 3**	26 (5S–FE)	**N 1**	26 (5S–FE)
C13 B	28	**I 4**	26 (5S–FE)	**O 3**	26 (5S–FE)
C14 A	28	**I 5**	26 (5S–FE)	**O 4**	26 (5S–FE)
D 1	26 (5S–FE)	**I 6**	26 (5S–FE)	**S10** A	29
E 2	26 (5S–FE)	**I 7**	26 (5S–FE)	B	29
E 3	26 (5S–FE)	**I 8**	26 (5S–FE)	**T 1**	26 (5S–FE)
E 6 B	29	**I 9**	26 (5S–FE)	**V 1**	26 (5S–FE)
E 7 C	29	**I10**	26 (5S–FE)	**V 3**	26 (5S–FE)

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
4	24	R/B NO. 4 (RIGHT KICK PANEL)
5	24	R/B NO. 5 (ENGINE COMPARTMENT FRONT RIGHT)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1B		
1D		
1E		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2A	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2B	20	ENGINE WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2C		
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
3B	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EB1	32 (5S–FE)	ENGINE WIRE AND COWL WIRE (REAR SIDE OF RIGHT FRONT FENDER)
IE1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
IG2	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)
IJ1	36	COWL WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (5S–FE)	FRONT RIGHT FENDER
EB	32 (5S–FE)	FRONT LEFT FENDER
EC	32 (5S–FE)	INTAKE MANIFOLD
ID	36	LEFT KICK PANEL
IG	36	R/B NO. 4 SET BOLT
BI	38 (L/B)	UNDER THE LEFT CENTER PILLAR

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 5	32 (5S–FE)	ENGINE WIRE	**I 2**	36	COWL WIRE
E 7			**I 6**		
E 8			**I 7**	36	ENGINE WIRE
E 9			**I 8**	36	COWL WIRE

SYSTEM OUTLINE

THE ENGINE CONTROL SYSTEM UTILIZES A MICROCOMPUTER AND MAINTAINS OVERALL CONTROL OF THE ENGINE ETC. AN OUTLINE OF ENGINE CONTROL IS GIVEN HERE.

1. INPUT SIGNALS

(1) WATER TEMP. SIGNAL SYSTEM
THE WATER TEMP. SENSOR DETECTS THE ENGINE COOLANT TEMP. AND HAS A BUILT–IN THERMISTOR WITH A RESISTANCE WHICH VARIES ACCORDING TO THE WATER TEMP. THUS THE WATER TEMP. IS INPUT IN THE FORM OF A CONTROL SIGNAL TO **TERMINAL THW** OF THE ECU.

(2) INTAKE AIR TEMP. SIGNAL SYSTEM
THE INTAKE AIR TEMP. SENSOR IS DETECTS THE INTAKE AIR TEMP., WHICH IS INPUT AS A CONTROL SIGNAL TO **TERMINAL THA** OF THE ECU.

(3) OXYGEN SENSOR SIGNAL SYSTEM
THE OXYGEN DENSITY IN THE EXHAUST EMISSIONS IS DETECTED AND INPUT AS A CONTROL SIGNAL TO **TERMINAL OX** OF THE ECU.

(4) RPM SIGNAL SYSTEM
CRANKSHAFT POSITION AND ENGINE RPM ARE DETECTED BY THE PICK–UP COIL INSTALLED INSIDE THE DISTRIBUTOR. CRANKSHAFT POSITION IS INPUT AS A CONTROL SIGNAL TO **TERMINAL G1** OF THE ECU, AND RPM IS INPUT TO **TERMINAL NE**.

(5) THROTTLE SIGNAL SYSTEM
THE THROTTLE POSITION SENSOR DETECTS THE THROTTLE VALVE OPENING ANGLE, WHICH IS INPUT AS A CONTROL SIGNAL TO **TERMINAL PSW** OF THE ECU, OR WHEN THE VALVE IS FULLY CLOSED, TO **TERMINAL IDL.**

(6) VEHICLE SPEED SIGNAL SYSTEM
THE SPEED SENSOR, INSTALLED INSIDE THE COMBINATION METER, DETECTS THE VEHICLE SPEED AND INPUTS A CONTROL SIGNAL TO **TERMINAL SPD** OF THE ECU.

(7) NEUTRAL START SW SIGNAL SYSTEM
THE NEUTRAL START SW DETECTS WHETHER THE SHIFT POSITION IS IN NEUTRAL OR NOT, AND INPUTS A CONTROL SIGNAL TO **TERMINAL NSW** OF THE ECU.

(8) A/C SW SIGNAL SYSTEM
THE OPERATING VOLTAGE OF THE A/C MAGNET CLUTCH IS DETECTED AND INPUT IN THE FORM OF A CONTROL SIGNAL TO **TERMINAL A/C** OF THE ECU.

(9) BATTERY SIGNAL SYSTEM
VOLTAGE IS CONSTANTLY APPLIED TO **TERMINAL BATT** OF THE ECU. WHEN THE IGNITION SW IS TURNED TO ON, VOLTAGE FOR ECU OPERATION IS APPLIED VIA THE EFI MAIN RELAY TO **TERMINALS +B** AND **+B1** OF THE ECU.

(10) INTAKE AIR VOLUME SIGNAL SYSTEM
INTAKE AIR VOLUME IS DETECTED BY THE VACUUM SENSOR AND IS INPUT AS A CONTROL SIGNAL TO **TERMINAL PIM** OF THE ECU.

(11) STA SIGNAL SYSTEM
TO CONFIRM THAT THE ENGINE IS CRANKING, THE VOLTAGE APPLIED TO THE STARTER MOTOR DURING CRANKING IS DETECTED AND IS INPUT AS A CONTROL SIGNAL TO **TERMINAL STA** OF THE ECU.

(12) ELECTRICAL LOAD SIGNAL SYSTEM
THE SIGNAL WHEN SYSTEMS SUCH AS THE REAR WINDOW DEFOGGER, HEADLIGHTS, ETC. WHICH CAUSE A HIGH ELECTRICAL BURDEN ARE ON IS INPUT TO **TERMINAL ELS** AS A CONTROL SIGNAL.

2. CONTROL SYSTEM

***** EFI (ELECTRONIC FUEL INJECTION) SYSTEM

THE EFI SYSTEM MONITORS THE ENGINE REVOLUTIONS THROUGH THE SIGNALS EACH SENSOR (INPUT SIGNALS (1) TO (11)) INPUTS TO THE ECU. BASED ON THIS DATA AND THE PROGRAM MEMORIZED IN THE ECU, THE MOST APPROPRIATE FUEL INJECTION TIMING IS DECIDED AND CURRENT IS OUTPUT TO **TERMINALS #10** AND **#20** OF THE ECU, CAUSING THE INJECTORS TO OPERATE IT (TO INJECT FUEL). IT IS THIS SYSTEM WHICH, THROUGH THE WORK OF THE ECU, FINELY CONTROLS FUEL INJECTION IN RESPONSE TO DRIVING CONDITIONS.

DURING ENGINE CRANKING (SIGNAL INPUT TO **TERMINAL STA**) OR FOR APPROX. **2** SECONDS AFTER NE SIGNAL INPUT, ECU OPERATION ENERGIZES (POINT CLOSED) THE FUEL PUMP CIRCUIT INSIDE THE CIRCUIT OPENING RELAY, CAUSING THE FUEL PUMP TO OPERATE.

***** ESA (ELECTRONIC SPARK ADVANCE) SYSTEM

THE ESA SYSTEM MONITORS THE ENGINE REVOLUTIONS USING THE SIGNALS (INPUT SIGNALS (1, 4, 5, 10, 11)) INPUT TO THE ECU FROM EACH SENSOR. BASED ON THIS DATA AND THE PROGRAM MEMORIZED IN THE ECU, THE MOST APPROPRIATE IGNITION TIMING IS DECIDED AND CURRENT IS OUTPUT TO **TERMINAL IGT** OF THE ECU. THIS OUTPUT CONTROLS THE IGNITER TO PRODUCE THE MOST APPROPRIATE IGNITION TIMING FOR THE DRIVING CONDITIONS.

***** IDLE–UP SPEED CONTROL SYSTEM

THE IDLE–UP SYSTEM USES THE AIR CONTROL VALVE FOR IDLE–UP TO INCREASE THE RPM AND PROVIDE STABLE IDLING WHEN THE IDLE SPEED DROPS DUE TO THE ELECTRICAL LOAD, ETC. THE ECU EVALUATES THE SIGNALS FROM EACH SENSOR (INPUT SIGNALS (1, 4 TO 8)), CURRENT IS OUTPUT TO **TERMINAL V–ISC** AND CONTROLS THE VSV.

* EGR CUT CONTROL SYSTEM

THE EGR CUT CONTROL SYSTEM CONTROLS THE VSV (FOR EGR) BY EVALUATING THE SIGNALS FROM EACH SENSOR INPUT TO THE ECU (INPUT SIGNALS (1, 5, 6, 9)) AND BY SENDING OUTPUT TO **TERMINAL EGR** OF THE ECU.

* A/C CUT CONTROL SYSTEM

WHEN THE VEHICLE SUDDENLY ACCELERATES FROM LOW ENGINE SPEED, THIS SYSTEM CUTS OFF AIR CONDITIONER OPERATION FOR A FIXED PERIOD OF TIME IN RESPONSE TO THE VEHICLE SPEED, THROTTLE VALVE OPENING ANGLE AND INTAKE MANIFOLD PRESSURE IN ORDER TO MAINTAIN ACCELERATION PERFORMANCE.

THE ECU RECEIVES INPUT SIGNALS ((4, 5, 6, 7 AND 10)), AND OUTPUTS SIGNALS TO **TERMINAL ACT**.

* OVERDRIVE CONTROL SYSTEM

THE ECU CONTROLS THE O/D SOLENOID OF THE AUTOMATIC TRANSAXLE IN RESPONSE TO SIGNALS FROM EACH SENSOR (INPUT SIGNALS (1, 4, 5, 6 AND 10)) IN ORDER TO MAINTAIN DRIVABILITY AND ACCELERATION PERFORMANCE.

THE ECU OUTPUTS A SIGNAL FROM **TERMINAL OD** TO CONTROL THE O/D SOLENOID.

3. DIAGNOSIS SYSTEM

WITH THE DIAGNOSIS SYSTEM, WHEN THERE IS A MALFUNCTIONING IN THE ECU SIGNAL SYSTEM, THE MALFUNCTION SYSTEM IS RECORDED IN THE MEMORY. THE MALFUNCTIONING SYSTEM CAN THEN BE FOUND BY READING THE DISPLAY (CODE) OF THE CHECK ENGINE WARNING LIGHT.

4. FAIL–SAFE SYSTEM

WHEN A MALFUNCTION OCCURS IN ANY SYSTEM, IF THERE IS A POSSIBILITY OF ENGINE TROUBLE BEING CAUSED BY CONTINUED CONTROL BASED ON THE SIGNALS FROM THAT SYSTEM, THE FAIL–SAFE SYSTEM EITHER CONTROLS THE SYSTEM BY USING DATA (STANDARD VALUES) RECORDED IN THE ECU MEMORY OR ELSE STOPS THE ENGINE.

SERVICE HINTS

E 5, E 8 ENGINE ECU

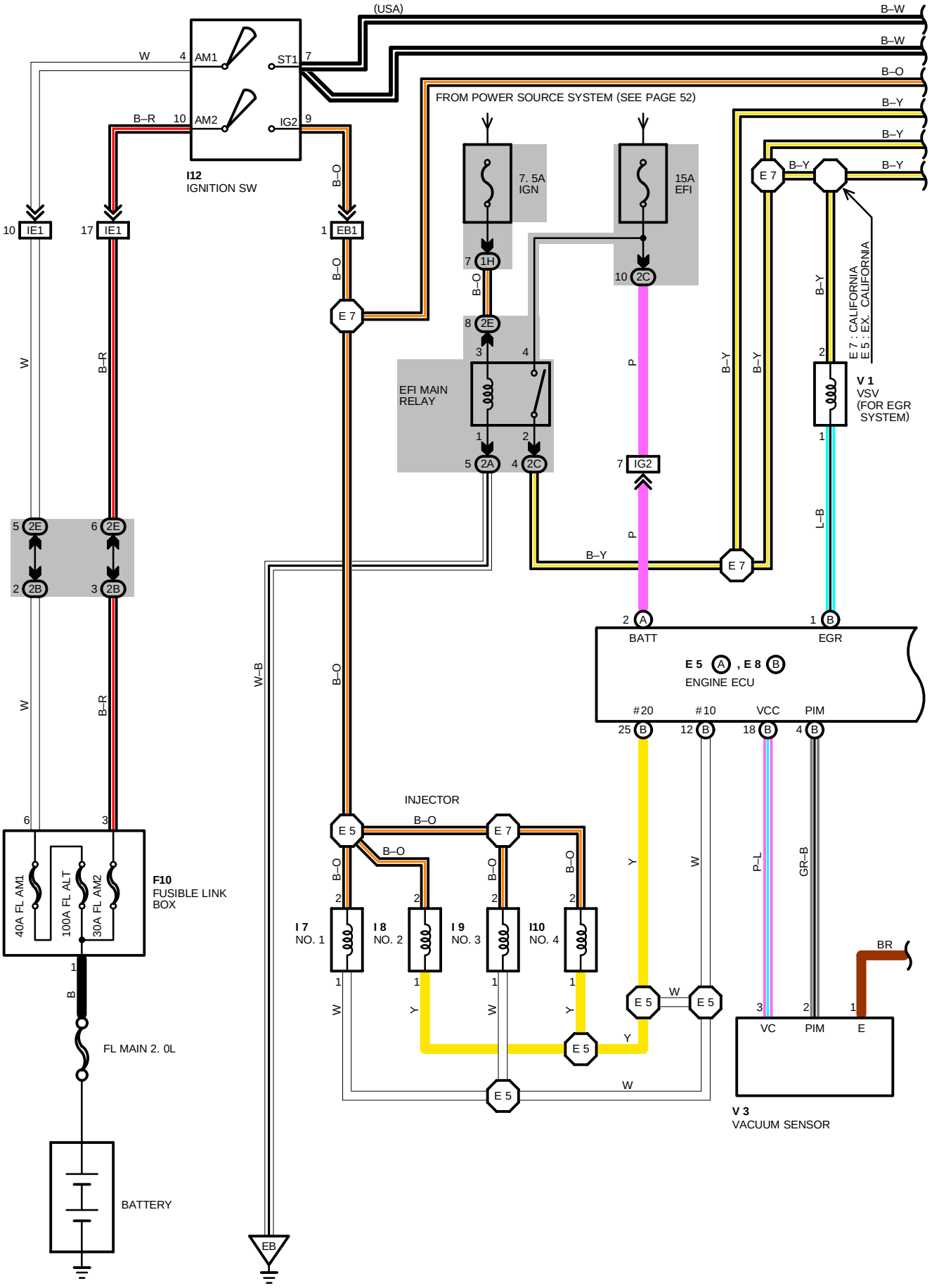
VOLTAGE AT ECU WIRING CONNECTORS

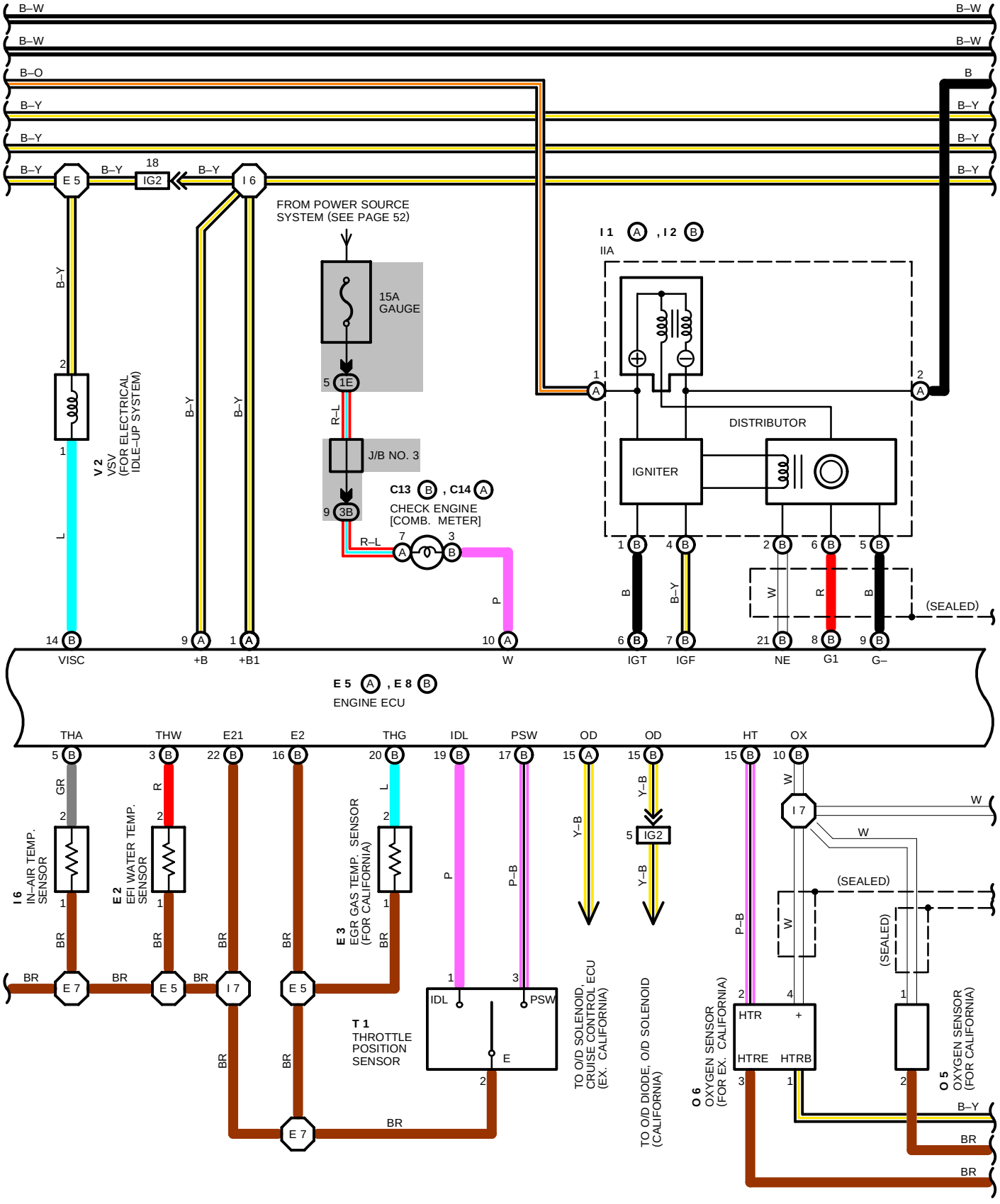
BATT–E1	:	ALWAYS **10.0–14.0** VOLTS
+B–E1	:	**10.0–14.0** VOLTS (IGNITION SW AT **ON** POSITION)
+B1–E1	:	**10.0–14.0** VOLTS (IGNITION SW AT **ON** POSITION)
IDL–E1	:	**8.0–14.0** VOLTS (IGNITION SW ON AND THROTTLE VALVE OPEN)
PSW–E1	:	**4.0–5.0** VOLTS (IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED)
PIM–E2	:	**3.3–3.9** VOLTS (IGNITION SW AT **ON** POSITION)
VCC–E2	:	**4.5–5.5** VOLTS (IGNITION SW AT **ON** POSITION)
#10, #20–E01, E02	:	**10.0–14.0** VOLTS (IGNITION SW AT **ON** POSITION)
THA–E2	:	**1.0–3.0** VOLTS (IGNITION SW ON AND INTAKE AIR TEMP. **20**˚C (**68**˚F))
THW–E2	:	**0.1–1.0** VOLTS (IGNITION SW ON AND COOLANT TEMP. **80**˚C (**176**˚F)
STA–E1	:	**6.0–14.0** VOLTS (ENGINE CRANKING)
IGT–E1	:	**0.7–1.0** VOLTS (ENGINE CRANKING OR IDLING)
W–E1	:	**10.0–14.0** VOLTS (IGNITION SW ON, NO TROUBLE AND ENGINE RUNNING)
A/C–E1	:	**8.0–14.0** VOLTS (IGNITION SW ON AND AIR CONDITIONING ON)
ACT–E1	:	**4.0–6.0** VOLTS (IGNITION SW ON AND HEATER BLOWER SW ON)
T–E1	:	**10.0–14.0** VOLTS (IGNITION SW ON AND CHECK CONNECTOR **T–E1** NOT CONNECTED)
	:	**0.5** OR LESS (IGNITION SW ON AND CHECK CONNECTOR **T–E1** CONNECTOR)
NSW–E1	:	**0–2.0** VOLTS (IGNITION SW ON AND NEUTRAL START SW POSITION **P** OR **N** RANGE)
	:	**10.0–14.0** VOLTS (IGNITION SW ON AND EX. NEUTRAL START SW POSITION **P** OR **N** RANGE)
V–ISC–E1	:	**10.0–14.0** VOLTS (ORANKING FOR **10** SECONDS AFTER STARTING)

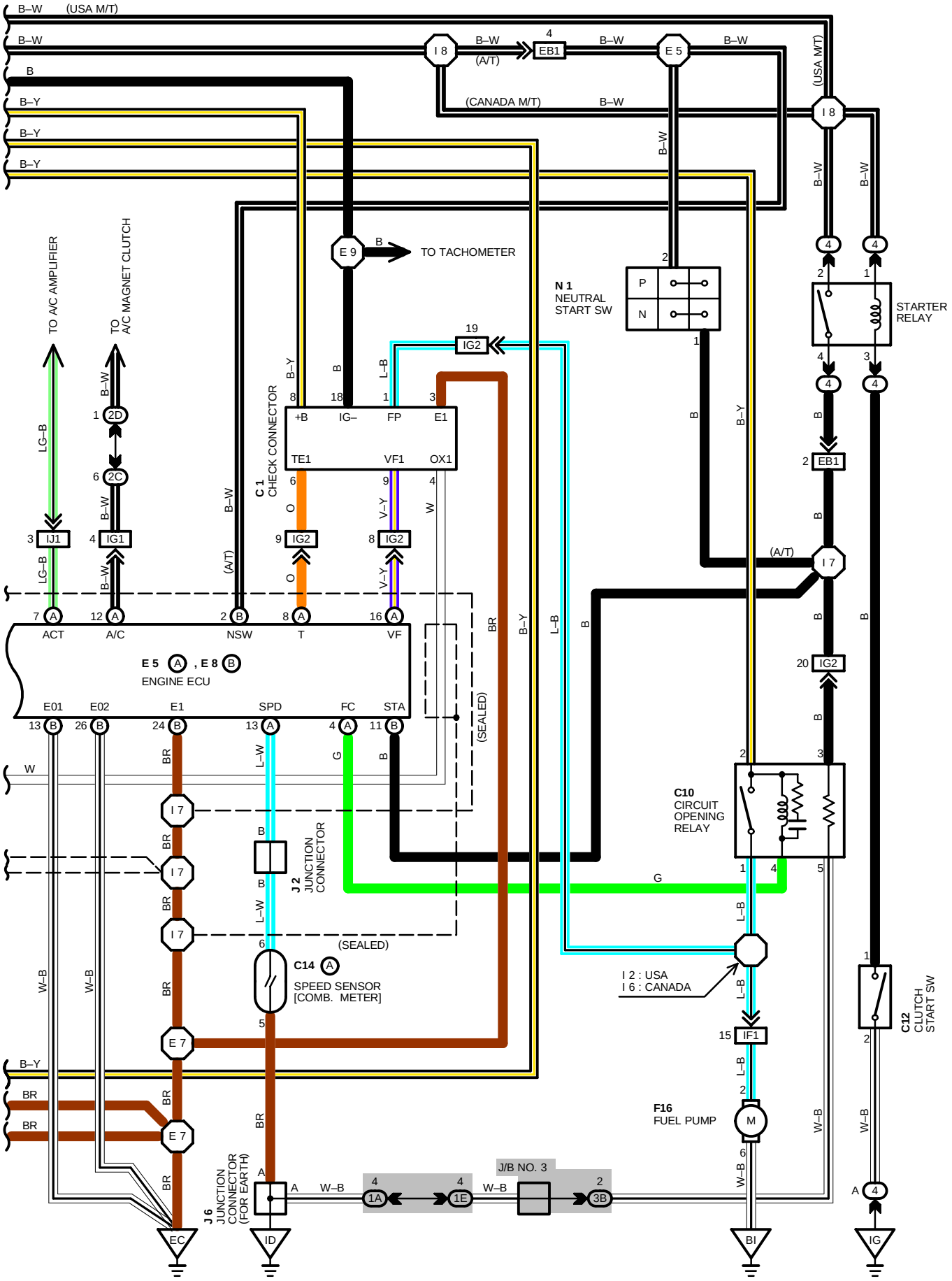
RESISTANCE AT ECU WIRING CONNECTORS

(DISCONNECT WIRING CONNECTOR)

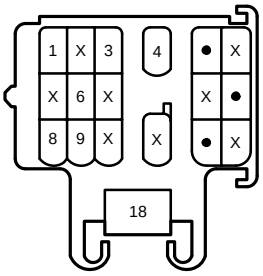
IDL–E2	:	INFINITY (THROTTLE VALVE OPEN)
		0 Ω (THROTTLE VALVE FULLY CLOSED)
PSW–E2	:	**0** Ω (THROTTLE VALVE FULLY OPEN)
		INFINITY (THROTTLE VALVE FULLY CLOSED)
THA–E1	:	**2.0 – 3.0** KΩ (INTAKE AIR TEMP. **20**˚C, **68**˚F)
THW–E1	:	**0.2 – 0.4** KΩ (COOLANT TEMP. **80**˚C, **176**˚F)
G1, NE–G–E	:	**0.17–0.21** KΩ
ISCC–+B	:	**19.–3–22.3** Ω
ISCO–+B		


(USA)
B–W
B–W
B–O
B–Y
B–Y
B–Y
FROM POWER SOURCE SYSTEM (SEE PAGE 52)
W
4
AM1
ST1
7
B–R
10
AM2
IG2
9
I12
IGNITION SW
B–O
10 IE1
17 IE1
1 EB1
7. 5A
IGN
15A
EFI
7 1H
10 2C
B–O
E 7
8 2E
3
4
EFI MAIN
RELAY
1
2
5 2A
4 2C
7 IG2
P
B–Y
B–Y
B–Y
E 7
B–Y
B–Y
2
E 7 : CALIFORNIA
E 5 : EX. CALIFORNIA
V 1
VSV
(FOR EGR
SYSTEM)
1
L–B
W
B–R
5 2E
6 2E
2 2B
3 2B
2 A
BATT
1 B
EGR
E 5 A , E 8 B
ENGINE ECU
#20
#10
VCC
PIM
25 B
12 B
18 B
4 B
W–B
B–O
W
B–R
INJECTOR
E 5
B–O
E 7
B–O
B–O
B–O
B–O
2
2
2
2
I 7
NO. 1
I 8
NO. 2
I 9
NO. 3
I10
NO. 4
1
1
1
1
W
Y
W
Y
Y
W
P–L
GR–B
BR
E 5
W
E 5
Y
E 5
W
E 5
3
2
1
VC
PIM
E
V 3
VACUUM SENSOR
6
3
F10
FUSIBLE LINK
BOX
40A FL AM1
100A FL ALT
30A FL AM2
1
B
FL MAIN 2. 0L
BATTERY
EB

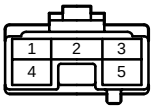

B–W
B–O
B–Y
B
E 5
IG2
I 6
18
FROM POWER SOURCE SYSTEM (SEE PAGE 52)
15A GAUGE
1E
J/B NO. 3
3B
C13 B , C14 A
CHECK ENGINE [COMB. METER]
V 2 VSV (FOR ELECTRICAL IDLE–UP SYSTEM)
I 1 A , I 2 B
IIA
DISTRIBUTOR
IGNITER
(SEALED)
VISC
+B
+B1
W
IGT
IGF
NE
G1
G–
E 5 A , E 8 B
ENGINE ECU
THA
THW
E21
E2
THG
IDL
PSW
OD
OD
HT
OX
I 6 IN–AIR TEMP. SENSOR
E 2 EFI WATER TEMP. SENSOR
E 3 EGR GAS TEMP. SENSOR (FOR CALIFORNIA)
T 1 THROTTLE POSITION SENSOR
TO O/D SOLENOID, CRUISE CONTROL ECU (EX. CALIFORNIA)
TO O/D DIODE, O/D SOLENOID (CALIFORNIA)
O 6 OXYGEN SENSOR (FOR EX. CALIFORNIA)
O 5 OXYGEN SENSOR (FOR CALIFORNIA)
I 7
E 7
HTR
HTRE
HTRB


B–W (USA M/T)
B–W
B
B–Y
B–Y
B–Y
I 8
B–W
4
EB1
(A/T)
E 5
(CANADA M/T)
TO TACHOMETER
E 9
TO A/C AMPLIFIER
TO A/C MAGNET CLUTCH
N 1
NEUTRAL START SW
P
N
STARTER RELAY
19
IG2
C 1
CHECK CONNECTOR
+B
IG–
FP
E1
TE1
VF1
OX1
2D
2C
IJ1
IG1
IG2
ACT
A/C
NSW
T
VF
E 5 A , E 8 B
ENGINE ECU
E01
E02
E1
SPD
FC
STA
EB1
I 7
20
IG2
C10
CIRCUIT OPENING RELAY
(SEALED)
J 2
JUNCTION CONNECTOR
C14 A
SPEED SENSOR [COMB. METER]
I 2 : USA
I 6 : CANADA
IF1
F16
FUEL PUMP
M
C12
CLUTCH START SW
J 6
JUNCTION CONNECTOR (FOR EARTH)
J/B NO. 3
1A
1E
3B
EC
ID
BI
IG

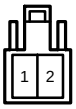
C 1 DARK GRAY



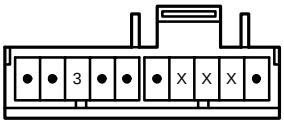
C10 DARK GRAY



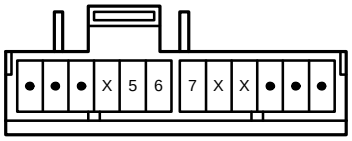
C12



C13 (B) BROWN



C14 (A)



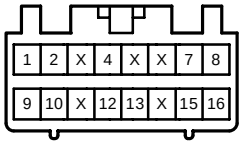
E 2 GREEN



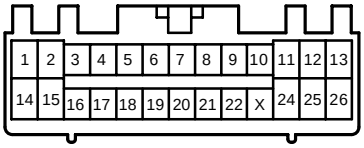
E 3 DARK GRAY



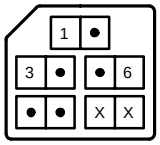
E 5 (A) DARK GRAY



E 8 (B) DARK GRAY



F10 BLACK



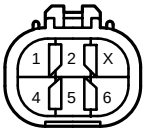
F16 DARK GRAY



I 1 (A) DARK GRAY



I 2 (B) DARK GRAY



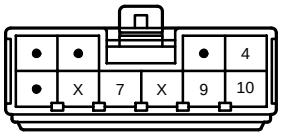
I 6 BLACK



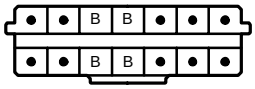
I 7, I 8, I 9, I10 GRAY



I12 BLACK

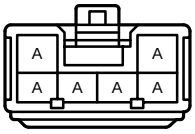


J 2



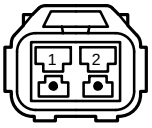
(HINT : SEE PAGE 7)

J 6



(HINT : SEE PAGE 7)

N 1 GRAY



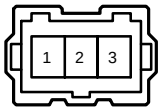
O 5 DARK GRAY



O 6 DARK GRAY



T 1 BLACK



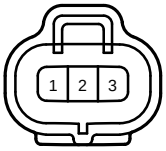
V 1 BROWN



V 2 BLUE



V 3 BLACK



SERVICE HINTS

E 5, E 8 ENGINE ECU

VOLTAGE AT ECU WIRING CONNECTORS

BATT–E1	:	ALWAYS **10.0–14.0** VOLTS
+B–E1	:	**10.0–14.0** VOLTS (IGNITION SW AT **ON** POSITION)
+B1–E1	:	**10.0–14.0** VOLTS (IGNITION SW AT **ON** POSITION)
IDL–E1	:	**8.0–14.0** VOLTS (IGNITION SW ON AND THROTTLE VALVE OPEN)
PSW–E1	:	**4.0–5.0** VOLTS (IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED)
PIM–E2	:	**3.3–3.9** VOLTS (IGNITION SW AT **ON** POSITION)
VCC–E2	:	**4.5–5.5** VOLTS (IGNITION SW AT **ON** POSITION)
#10, #20–E01, E02	:	**10.0–14.0** VOLTS (IGNITION SW AT **ON** POSITION)
THA–E2	:	**1.0–3.0** VOLTS (IGNITION SW ON AND INTAKE AIR TEMP. **20**˚C (**68**˚F))
THW–E2	:	**0.1–1.0** VOLTS (IGNITION SW ON AND COOLANT TEMP. **80**˚C (**176**˚F)
STA–E1	:	**6.0–14.0** VOLTS (ENGINE CRANKING)
IGT–E1	:	**0.7–1.0** VOLTS (ENGINE CRANKING OR IDLING)
W–E1	:	**10.0–14.0** VOLTS (IGNITION SW ON, NO TROUBLE AND ENGINE RUNNING)
A/C–E1	:	**8.0–14.0** VOLTS (IGNITION SW ON AND AIR CONDITIONING ON)
ACT–E1	:	**4.0–6.0** VOLTS (IGNITION SW ON AND HEATER BLOWER SW ON)
T–E1	:	**10.0–14.0** VOLTS (IGNITION SW ON AND CHECK CONNECTOR **TE1–E1** NOT CONNECTED)
	:	**0.5** OR LESS (IGNITION SW ON AND CHECK CONNECTOR **TE1–E1** CONNECTOR)
NSW–E1	:	**0–2.0** VOLTS (IGNITION SW ON AND NEUTRAL START SW POSITION **P** OR **N** RANGE)
	:	**10.0–14.0** VOLTS (IGNITION SW ON AND EX. NEUTRAL START SW POSITION **P** OR **N** RANGE)
V–ISC–E1	:	**10.0–14.0** VOLTS (CRANKING FOR **10** SECONDS AFTER STARTING)

RESISTANCE AT ECU WIRING CONNECTORS

(DISCONNECT WIRING CONNECTOR)

IDL–E2	:	INFINITY (THROTTLE VALVE OPEN)
		0 Ω (THROTTLE VALVE FULLY CLOSED)
PSW–E2	:	**0** Ω (THROTTLE VALVE FULLY OPEN)
		INFINITY (THROTTLE VALVE FULLY CLOSED)
THA–E1	:	**2.0 – 3.0** KΩ (INTAKE AIR TEMP. **20**˚C, **68**˚F)
THW–E1	:	**0.2 – 0.4** KΩ (COOLANT TEMP. **80**˚C, **176**˚F)
G1, NE–G–	:	**0.17–0.21** KΩ
ISCC–+B	:	**19.3–22.3** Ω
ISCO–+B	:	**19.3–22.3** Ω

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C 1	27 (4A–FE)	**F16**	30 (L/B), 31 (C/P)	**J 6**	29
C10	28	**I 1** A	27 (4A–FE)	**N I**	27 (4A–FE)
C12	28	**I 2** B	27 (4A–FE)	**O 5**	27 (4A–FE)
C13 B	28	**I 6**	27 (4A–FE)	**O 6**	27 (4A–FE)
C14 A	28	**I 7**	27 (4A–FE)	**T 1**	27 (4A–FE)
E 2	27 (4A–FE)	**I 8**	27 (4A–FE)	**V 1**	27 (4A–FE)
E 3	27 (4A–FE)	**I 9**	27 (4A–FE)	**V 2**	27 (4A–FE)
E 5 A	29	**I10**	27 (4A–FE)	**V 3**	27 (4A–FE)
E 8 B	29	**I12**	29		
F10	27 (4A–FE)	**J 2**	29		

⬭ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
4	24	R/B NO. 4 (RIGHT KICK PANEL)

⬭ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2A	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2B	20	ENGINE WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2C		
2D	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2E		
3B	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

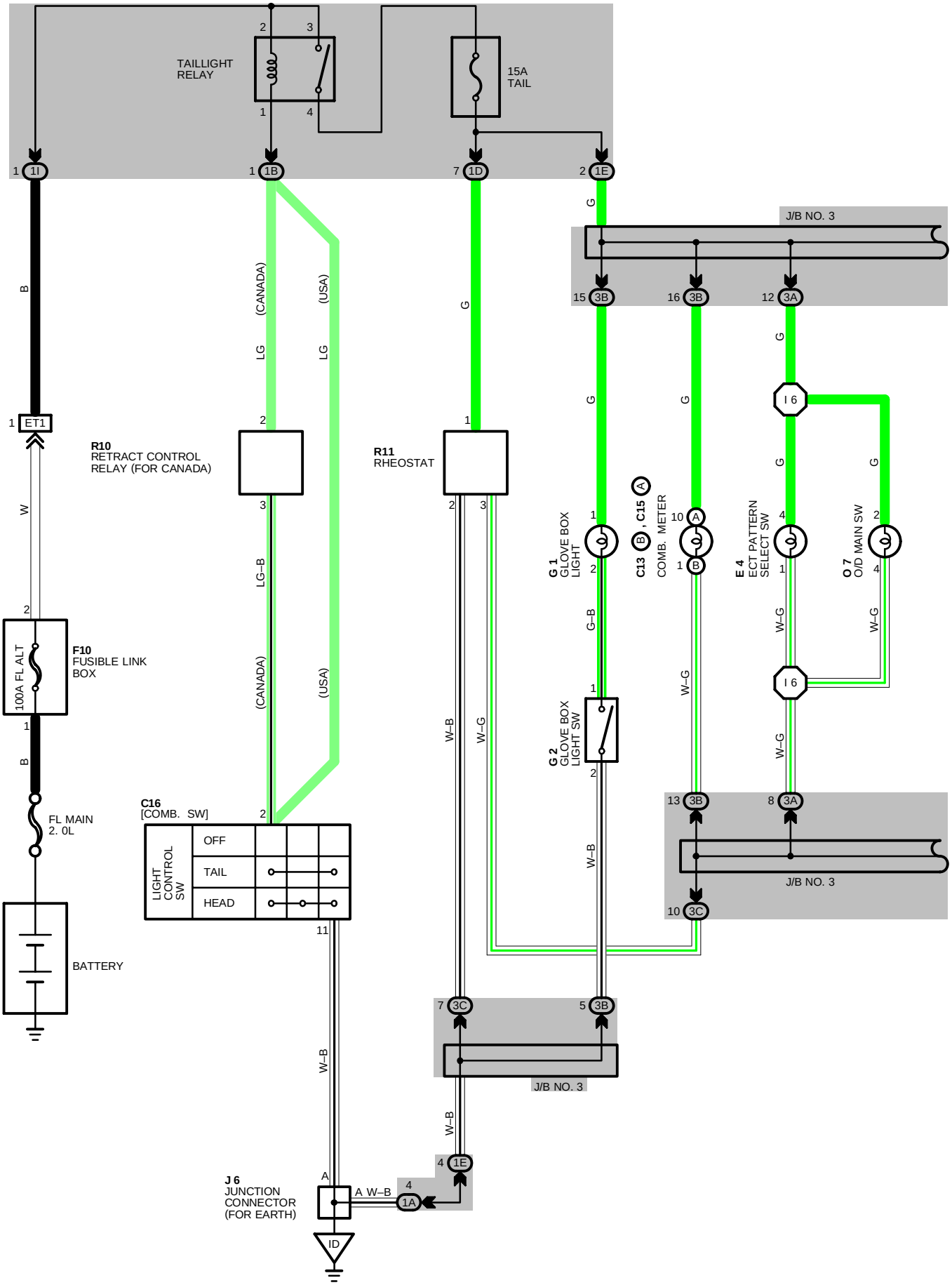
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EB1	34 (4A–FE)	ENGINE WIRE AND COWL WIRE (REAR SIDE OF RIGHT FRONT FENDER)
IE1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
IG1	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)
IG2		
IJ1	36	COWL WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)

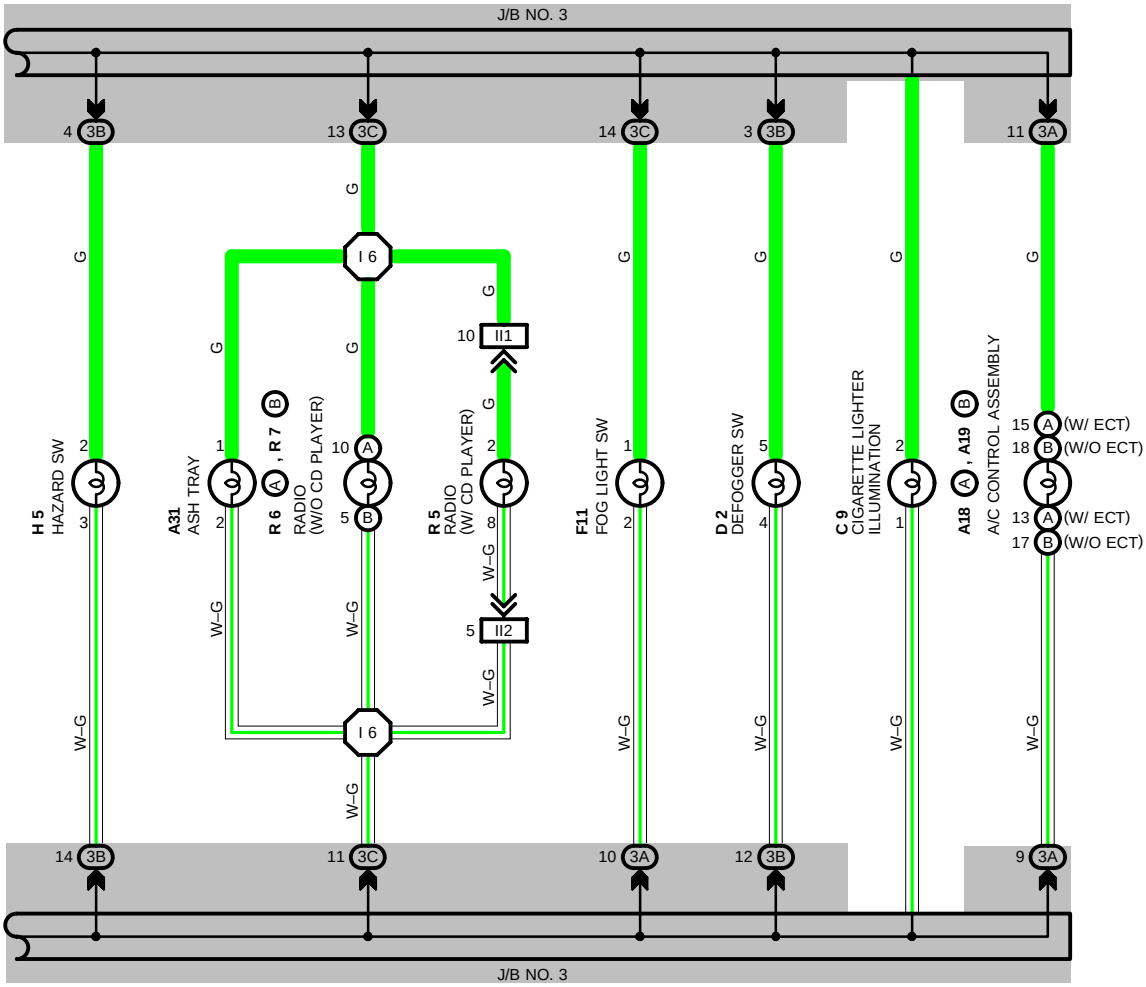
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EB	34 (4A–FE)	FRONT LEFT FENDER
EC	34 (4A–FE)	INTAKE MANIFOLD
ID	36	LEFT KICK PANEL
IG	36	R/B NO. 4 SET BOLT
BI	38 (L/B)	UNDER THE LEFT CENTER PILLAR

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 5	34 (4A–FE)	ENGINE WIRE	**I 6**	36	COWL WIRE
E 7			**I 7**	36	ENGINE WIRE
E 9			**I 8**	36	COWL WIRE
I 2	36	COWL WIRE			


TAILLIGHT RELAY
15A TAIL
1I
1B
7 1D
2 1E
J/B NO. 3
15 3B
16 3B
12 3A
B
G
(CANADA)
(USA)
LG
1 ET1
R10
RETRACT CONTROL RELAY (FOR CANADA)
R11
RHEOSTAT
I 6
G 1
GLOVE BOX LIGHT
C13 , C15
COMB. METER
E 4
ECT PATTERN SELECT SW
O 7
O/D MAIN SW
W
G–B
W–G
W–B
F10
FUSIBLE LINK BOX
100A FL ALT
FL MAIN
2. 0L
BATTERY
C16
[COMB. SW]
LIGHT CONTROL SW
OFF
TAIL
HEAD
G 2
GLOVE BOX LIGHT SW
13 3B
8 3A
10 3C
7 3C
5 3B
J/B NO. 3
4 1E
J 6
JUNCTION CONNECTOR (FOR EARTH)
A W–B
4 1A
ID


J/B NO. 3
4 3B
13 3C
14 3C
3 3B
11 3A
G
I 6
10 II1
5 II2
W–G
H 5
HAZARD SW
A31
ASH TRAY
R 6 , R 7
RADIO
(W/O CD PLAYER)
R 5
RADIO
(W/ CD PLAYER)
F11
FOG LIGHT SW
D 2
DEFOGGER SW
C 9
CIGARETTE LIGHTER
ILLUMINATION
A18 , A19
A/C CONTROL ASSEMBLY
15 (W/ ECT)
18 (W/O ECT)
13 (W/ ECT)
17 (W/O ECT)
14 3B
11 3C
10 3A
12 3B
9 3A
J/B NO. 3

ILLUMINATION

SERVICE HINTS

TAILLIGHT RELAY

1–2 : CLOSED WITH LIGHT CONTROL SW AT **TAIL** OR **HEAD** POSITION (WHEN LIGHT AUTO TURN OFF SYSTEM IS OFF)

R 8 RHEOSTAT

1–2 : APPROX. **12** VOLTS WITH RHEOSTAT FULLY TURNED COUNTERCLOCKWISE AND **0** VOLTS WITH FULLY TURNED CLOCKWISE

○ : PARTS LOCATION

CODE		SEE PAGE	CODE	SEE PAGE	CODE		SEE PAGE
A18	A	28	**D 2**	28	**J 6**		29
A19	B	28	**E 4**	29	**O 7**		29
A31		28	**F10**	26 (5S–FE), 27 (4A–FE)	**R 5**		29
C 9		28	**F11**	29	**R 6**	A	29
C13	B	28	**G 1**	29	**R 7**	B	29
C15	A	28	**G 2**	29	**R10**		29
C16		28	**H 5**	29	**R11**		29

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1B		
1D		
1E		
1I	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
3A	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)
3B		
3C		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

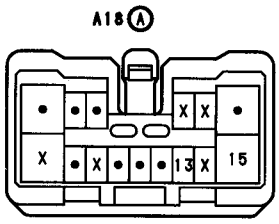
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
ET1	32 (5S–FE)	ENGINE ROOM MAIN WIRE AND ENGINE WIRE (NEAR THE J/B NO. 2)
	34 (4A–FE)	
II1	36	COWL WIRE AND CONSOLE BOX WIRE (INSTRUMENT PANEL CENTER)
II2		

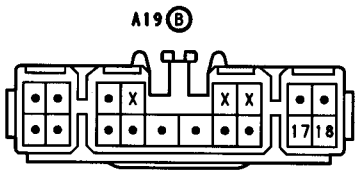
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL

: SPLICE POINTS

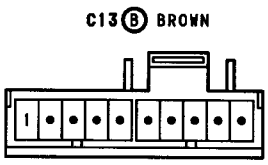
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 6	36	COWL WIRE			

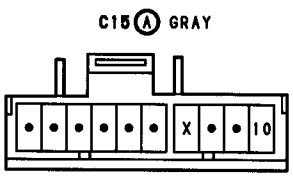


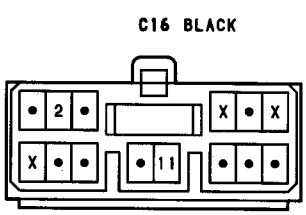


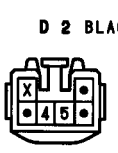








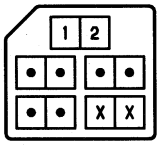




E 4 BLACK



F10 BLACK



F11 BLACK



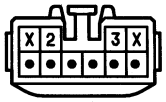
G 1 GRAY



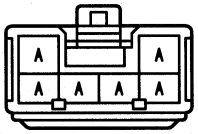
G 2



H 5 BLACK



J 6

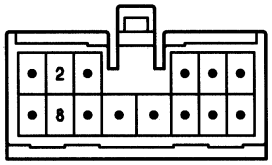


(HINT:SEE PAGE 7)

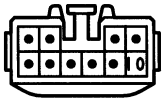
O 7



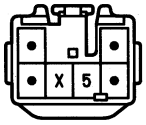
R 5



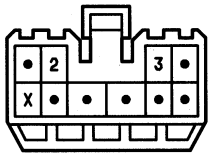
R 6Ⓐ



R 7Ⓑ



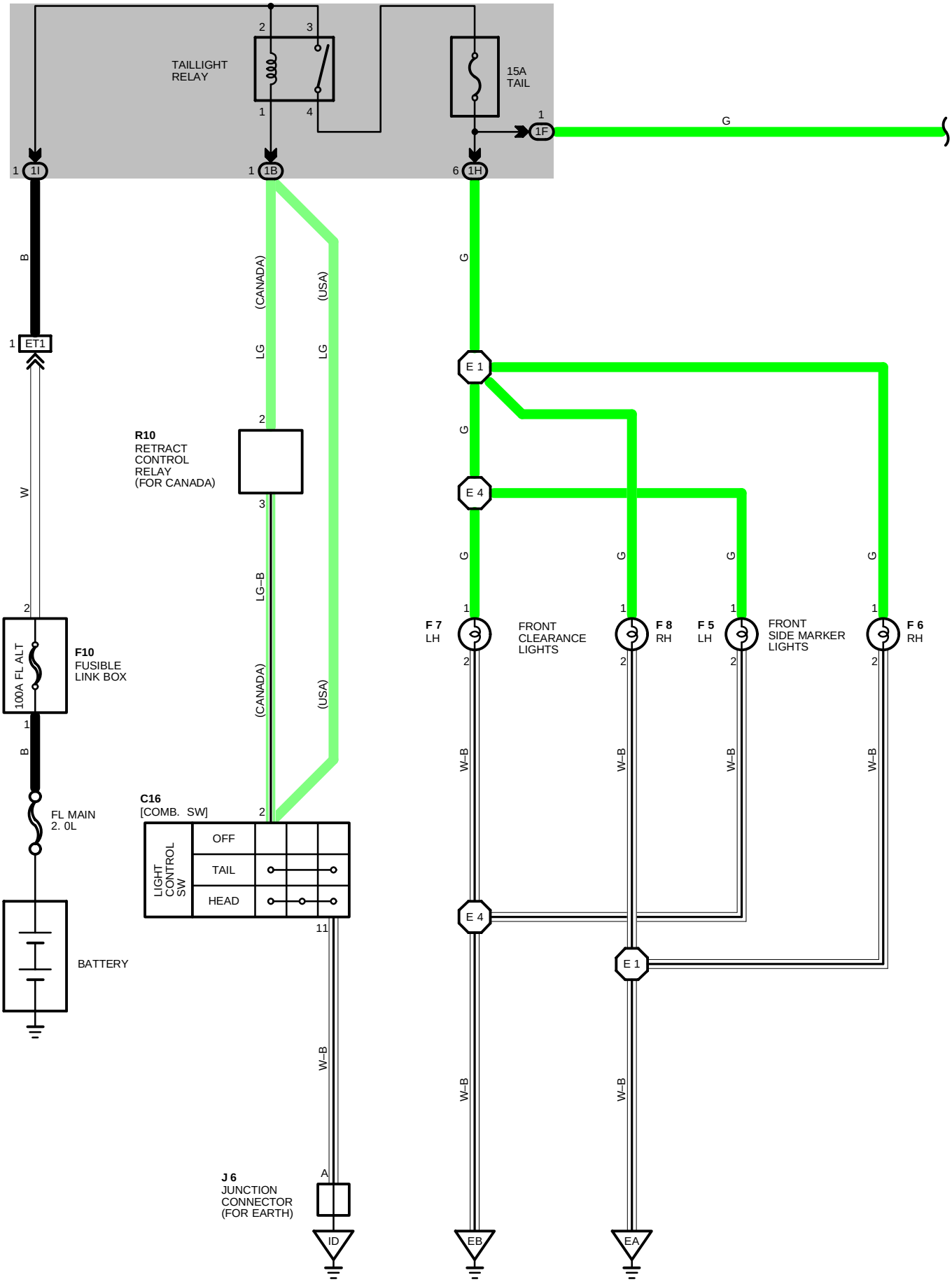
R10

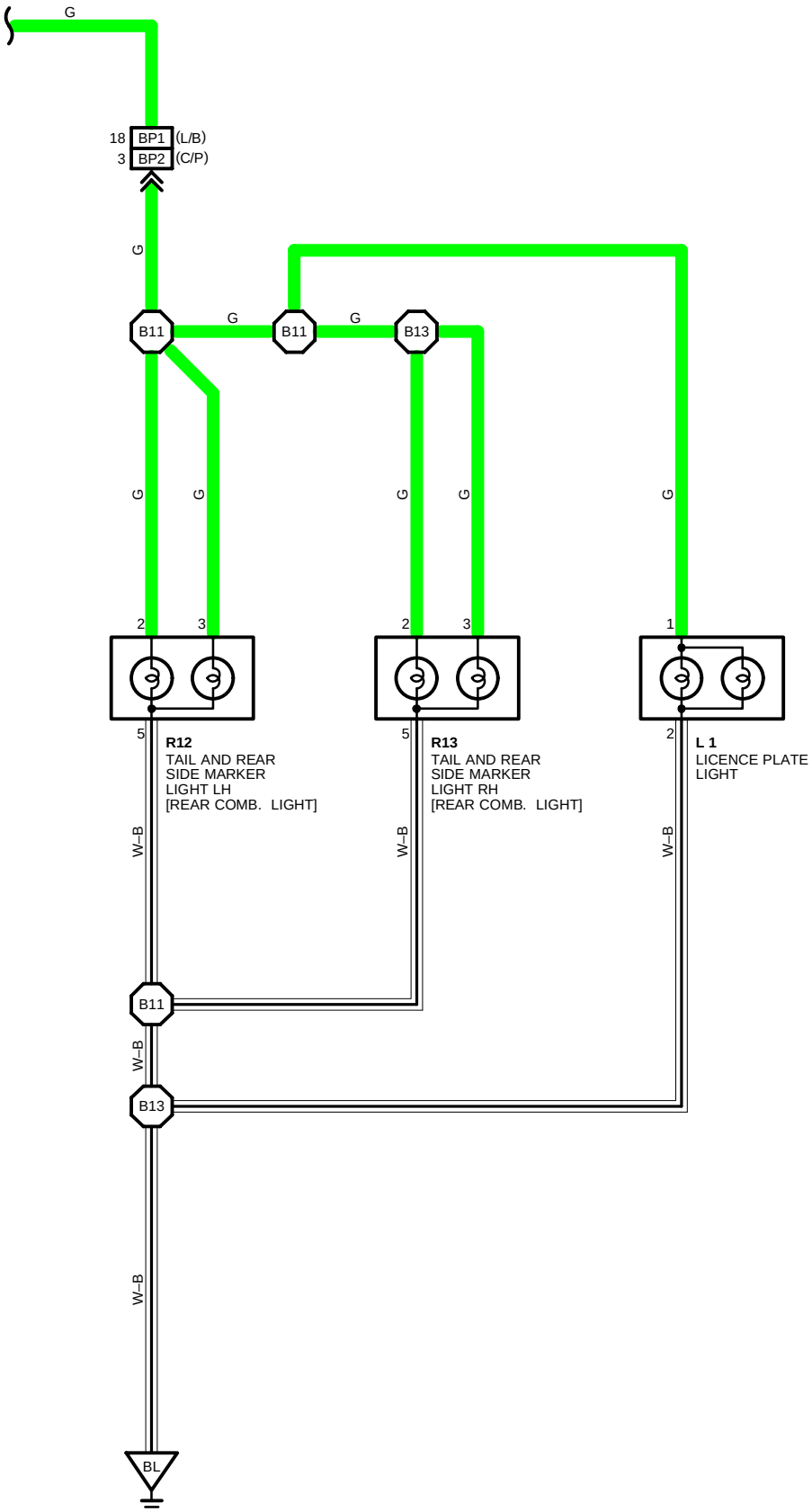


R11



TAILLIGHT


TAILLIGHT RELAY
15A TAIL
1I
1B
1H
1F
G
B
ET1
W
2
100A FL ALT
F10 FUSIBLE LINK BOX
1
B
FL MAIN 2. 0L
BATTERY
(CANADA)
(USA)
LG
LG
R10 RETRACT CONTROL RELAY (FOR CANADA)
3
LG–B
(CANADA)
(USA)
C16 [COMB. SW]
LIGHT CONTROL SW
OFF
TAIL
HEAD
11
W–B
J 6 JUNCTION CONNECTOR (FOR EARTH)
A
ID
E 1
E 4
F 7 LH
F 8 RH
F 5 LH
F 6 RH
FRONT CLEARANCE LIGHTS
FRONT SIDE MARKER LIGHTS
EB
EA


G
18
BP1
(L/B)
3
BP2
(C/P)
G
B11
G
B11
G
B13
G
G
G
G
G
2
3
2
3
1
5
5
2
R12
TAIL AND REAR
SIDE MARKER
LIGHT LH
[REAR COMB. LIGHT]
R13
TAIL AND REAR
SIDE MARKER
LIGHT RH
[REAR COMB. LIGHT]
L 1
LICENCE PLATE
LIGHT
W–B
W–B
W–B
B11
W–B
B13
W–B
BL

TAILLIGHT

SERVICE HINTS

TAILLIGHT RELAY

1–2 : CLOSED WITH LIGHT CONTROL SW AT **TAIL** OR **HEAD** POSITION

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C16	28	**F 8**	26 (5S–FE), 27 (4A–FE)	**R10**	29
F 5	26 (5S–FE), 27 (4A–FE)	**F10**	26 (5S–FE), 27 (4A–FE)	**R12**	30 (L/B), 31 (C/P)
F 6	26 (5S–FE), 27 (4A–FE)	**J 6**	29	**R13**	30 (L/B), 31 (C/P)
F 7	26 (5S–FE), 27 (4A–FE)	**L 1**	30 (L/B), 31 (C/P)		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1F	18	FLOOR WIRE AND J/B NO.1 (LEFT KICK PANEL)
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1I		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
ET1	32 (5S–FE)	ENGINE ROOM MAIN WIRE AND ENGINE WIRE (NEAR THE J/B NO. 2)
	34 (4A–FE)	
BP1	38 (L/B)	FLOOR WIRE AND LUGGAGE ROOM WIRE (LEFT QUARTER PANEL CENTER)
BP2	40 (C/P)	FLOOR WIRE AND LUGGAGE ROOM WIRE (LUGGAGE COMPARTMENT LEFT)

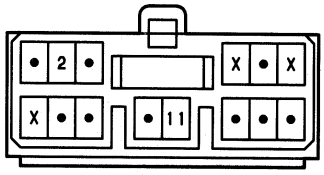
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (5S–FE)	FRONT RIGHT FENDER
	34 (4A–FE)	
EB	32 (5S–FE)	FRONT LEFT FENDER
	34 (4A–FE)	
ID	36	LEFT KICK PANEL
BL	38 (L/B)	BACK PANEL CENTER
	40 (C/P)	

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 1	32 (5S–FE)	ENGINE ROOM MAIN WIRE	**B11**	38 (L/B)	LUGGAGE ROOM WIRE
	34 (4A–FE)			40 (C/P)	
E 4	32 (5S–FE)		**B13**	38 (L/B)	
	34 (4A–FE)			40 (C/P)	

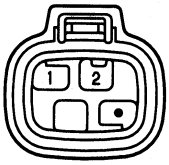
C16 BLACK



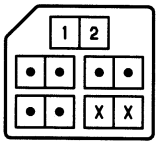
F 5, F 6



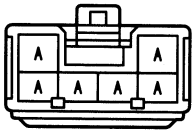
F 7, F 8 GRAY



F10 BLACK



J 6

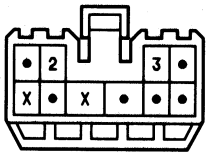


(HINT:SEE PAGE 7)

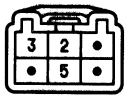
L 1



R10



R12, R13



SERVICE HINTS

HEADLIGHT RELAY

1–2 : CLOSED WITH LIGHT CONTROL SW AT **HEAD** POSITION OR DIMMER SW AT **FLASH** POSITION

: PARTS LOCATION

CODE		SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C14		28	**H 1**	26 (5S–FE), 27 (4A–FE)	**R 3**	26 (5S–FE), 27 (4A–FE)
C16	A	28	**H 2**	26 (5S–FE), 27 (4A–FE)	**R 9**	29
C17	B	28	**J 6**	29		
F10		26 (5S–FE), 27 (4A–FE)	**R 2**	26 (5S–FE), 27 (4A–FE)		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
2A	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2B	20	ENGINE WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2D	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2E		
3B	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IE1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)

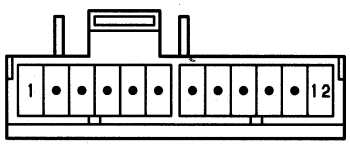
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EB	34 (5S–FE)	FRONT LEFT FENDER
	34 (4A–FE)	
ID	36	LEFT KICK PANEL

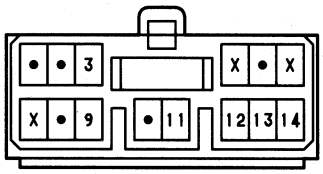
: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32 (5S–FE)	ENGINE ROOM MAIN WIRE	**E 4**	32 (5S–FE)	ENGINE ROOM MAIN WIRE
	34 (4A–FE)			34 (4A–FE)	
E 3	32 (5S–FE)		**I 1**	36	COWL WIRE
	34 (4A–FE)		**I 2**		

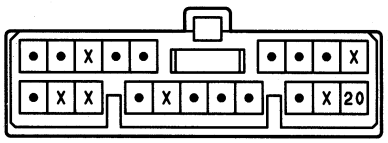
C14



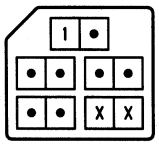
C16 (A) BLACK



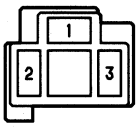
C17 (B) BLACK



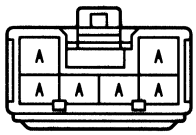
F10



H 1, H 2

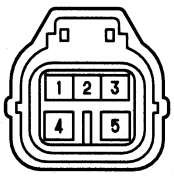


J 6

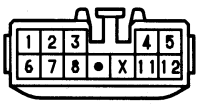


(HINT: SEE PAGE 7)

R 2, R 3

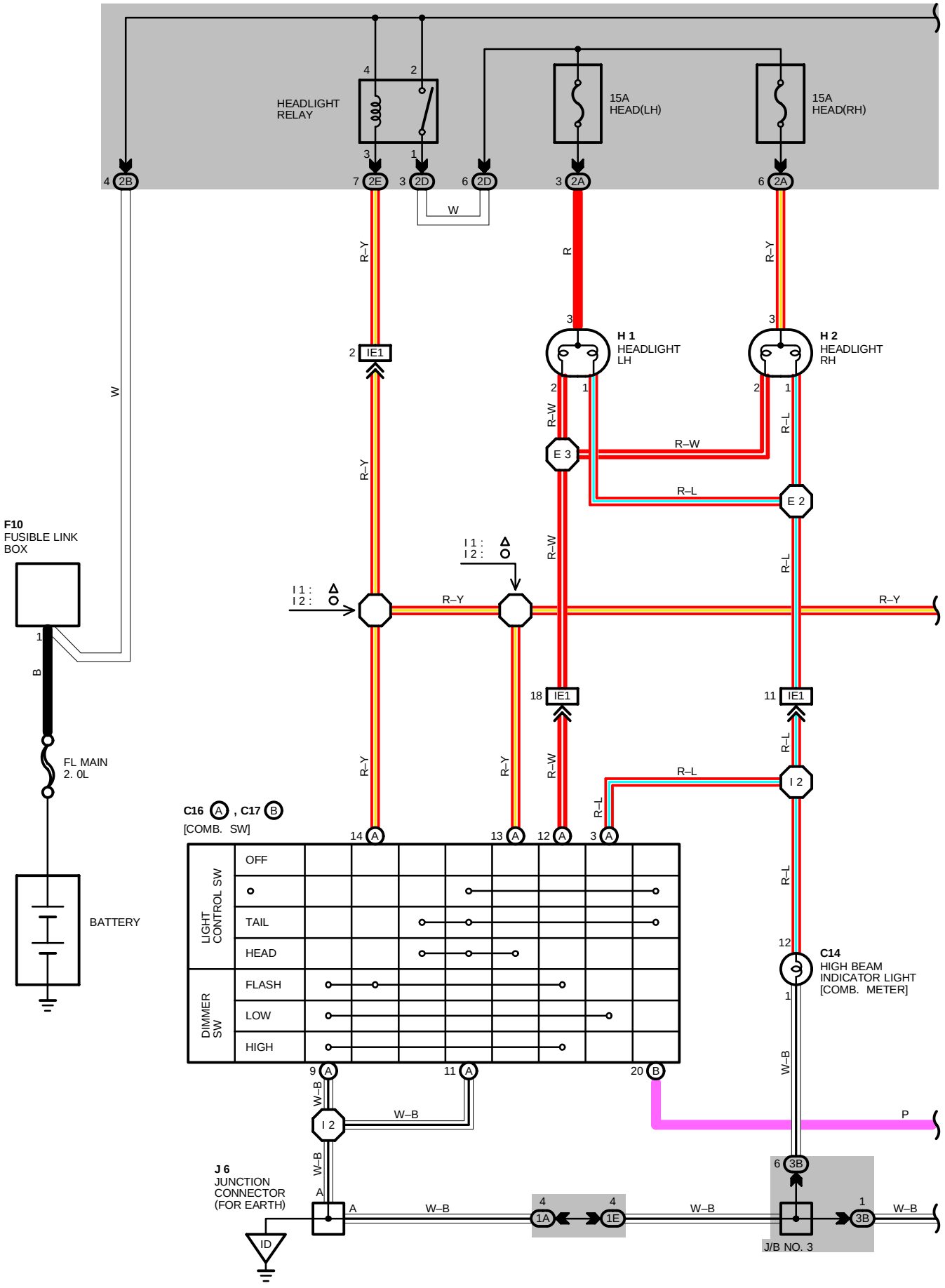


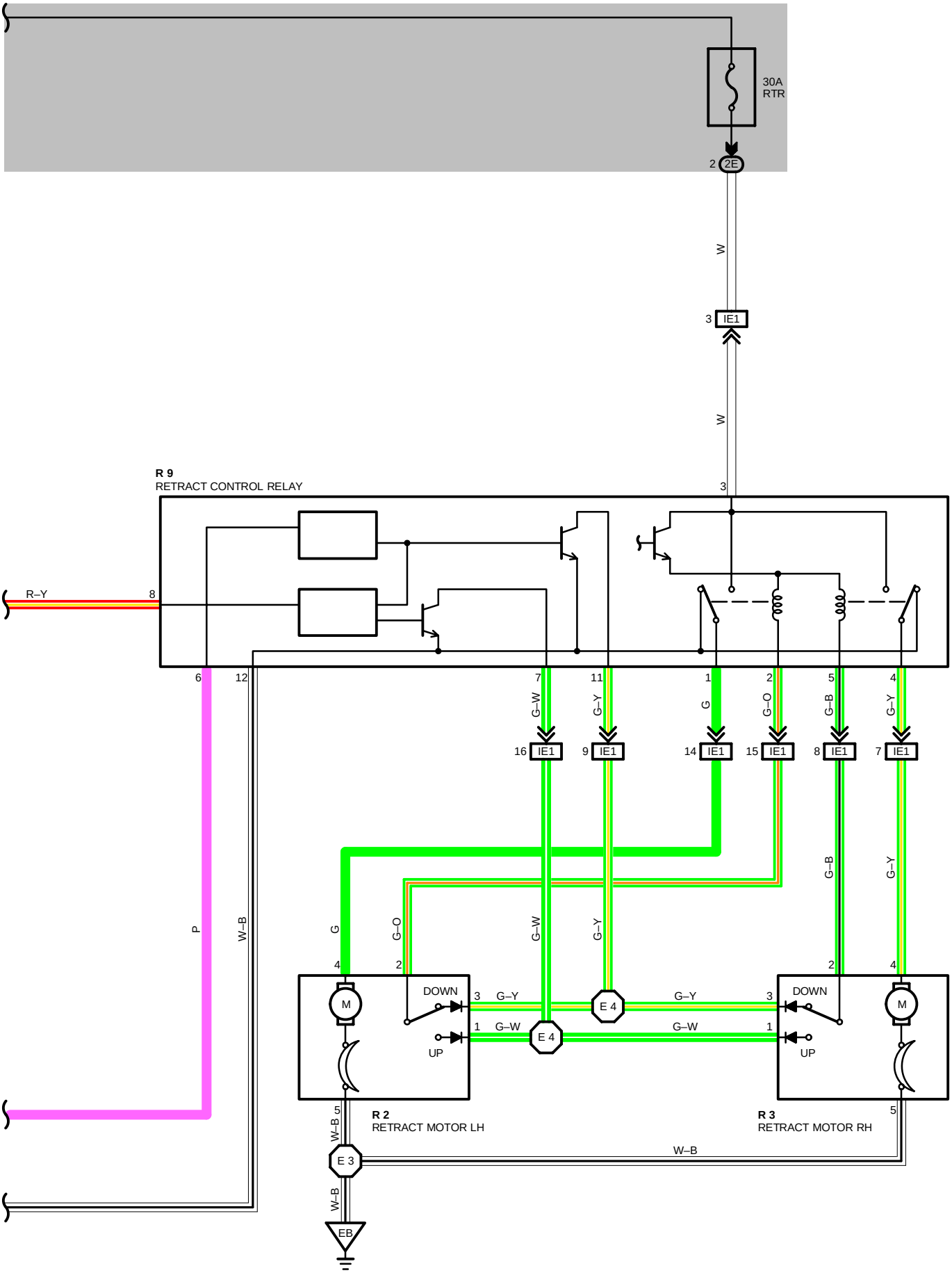
R 9



HEADLIGHT (USA)

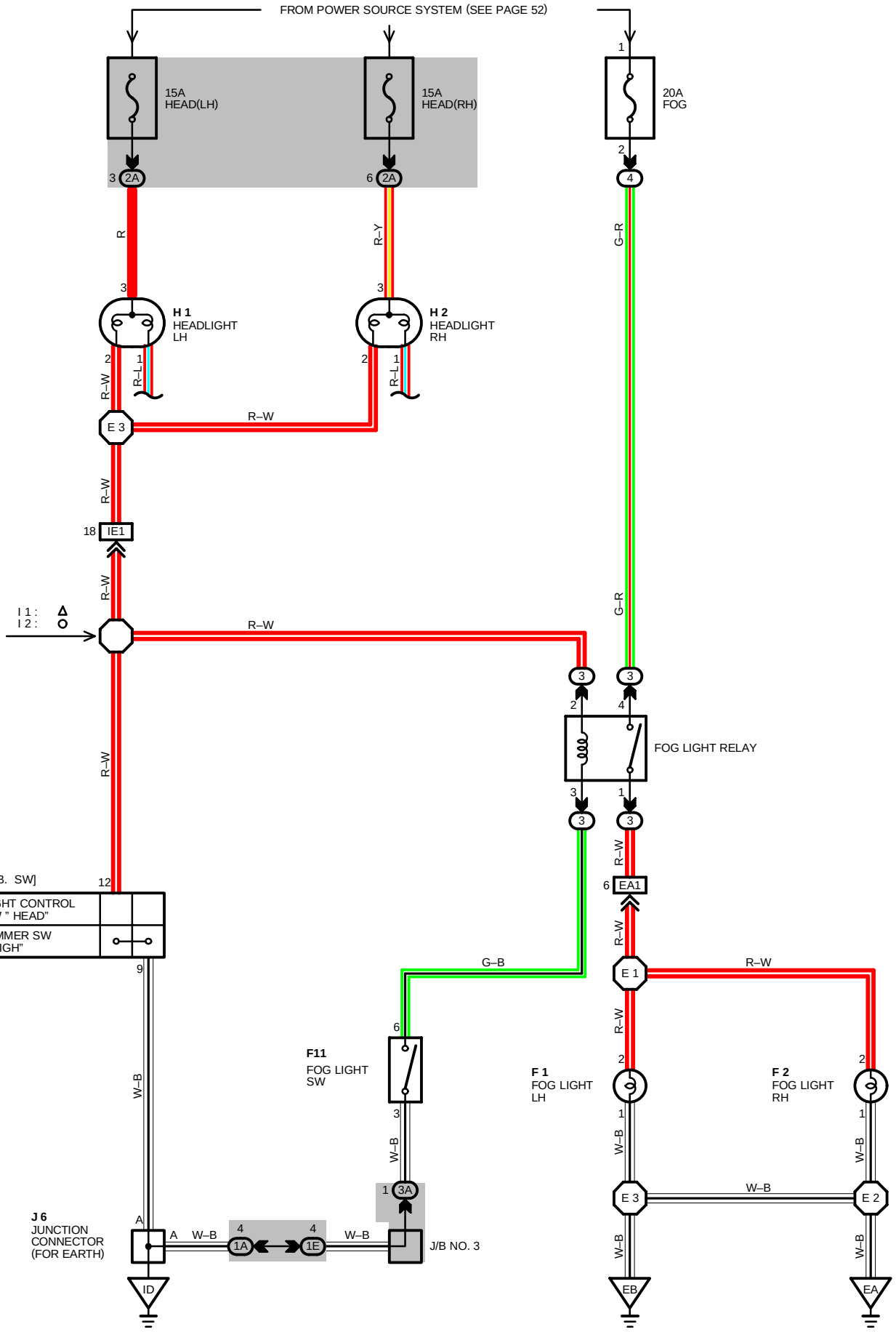
△ W/ CRUISE CONTROL AND ABS
○ EX. W/ CRUISE CONTROL AND ABS




30A
RTR
2E
W
3
IE1
W
R 9
RETRACT CONTROL RELAY
R–Y
8
6
12
7
11
1
2
5
4
G–W
G–Y
G
G–O
G–B
G–Y
16
9
14
15
8
7
G
G–O
G–W
G–Y
G–B
G–Y
4
2
2
4
DOWN
M
3
G–Y
E 4
G–Y
3
DOWN
M
1
G–W
E 4
G–W
1
UP
UP
P
W–B
5
5
R 2
RETRACT MOTOR LH
R 3
RETRACT MOTOR RH
W–B
W–B
E 3
W–B
EB

FOG LIGHT (USA)

△ W/ CRUISE CONTROL AND ABS
○ EX. W/ CRUISE CONTROL AND ABS



SERVICE HINTS

FOG LIGHT RELAY

(3) 1–**(3)** 4 : CLOSED WITH LIGHT CONTROL SW AT **HEAD** POSITION, DIMMER SW AT **LOW** POSITION AND FOG LIGHT SW ON

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C16	28	**F11**	29	**J 6**	29
F 1	26 (5S–FE), 27 (4A–FE)	**H 1**	26 (5S–FE), 27 (4A–FE)	**R10**	29
F 2	26 (5S–FE), 27 (4A–FE)	**H 2**	26 (5S–FE), 27 (4A–FE)		

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
3	23	R/B NO. 3 (RIGHT KICK PANEL)
4	23	R/B NO. 4 (RIGHT KICK PANEL)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
2A	18	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
3A	18	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	32 (5S–FE)	COWL WIRE AND ENGINE ROOM MAIN WIRE (FRONT SIDE OF RIGHT FRONT FENDER)
	34 (4A–FE)	
IE1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)

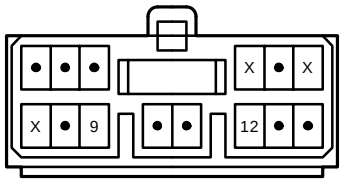
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (5S–FE)	FRONT RIGHT FENDER
	34 (4A–FE)	
EB	32 (5S–FE)	FRONT LEFT FENDER
	34 (4A–FE)	
ID	36	LEFT KICK PANEL

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 1	32 (5S–FE)	ENGINE ROOM MAIN WIRE	**E 3**	32 (5S–FE)	ENGINE ROOM MAIN WIRE
	34 (4A–FE)			34 (4A–FE)	
E 2	32 (5S–FE)		**I 2**	36	COWL WIRE
	34 (4A–FE)				

C16 BLACK



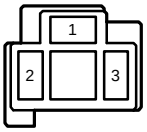
F 1, F 2



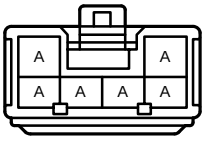
F11 BLACK



H 1, H 2 BROWN

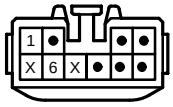


J 6

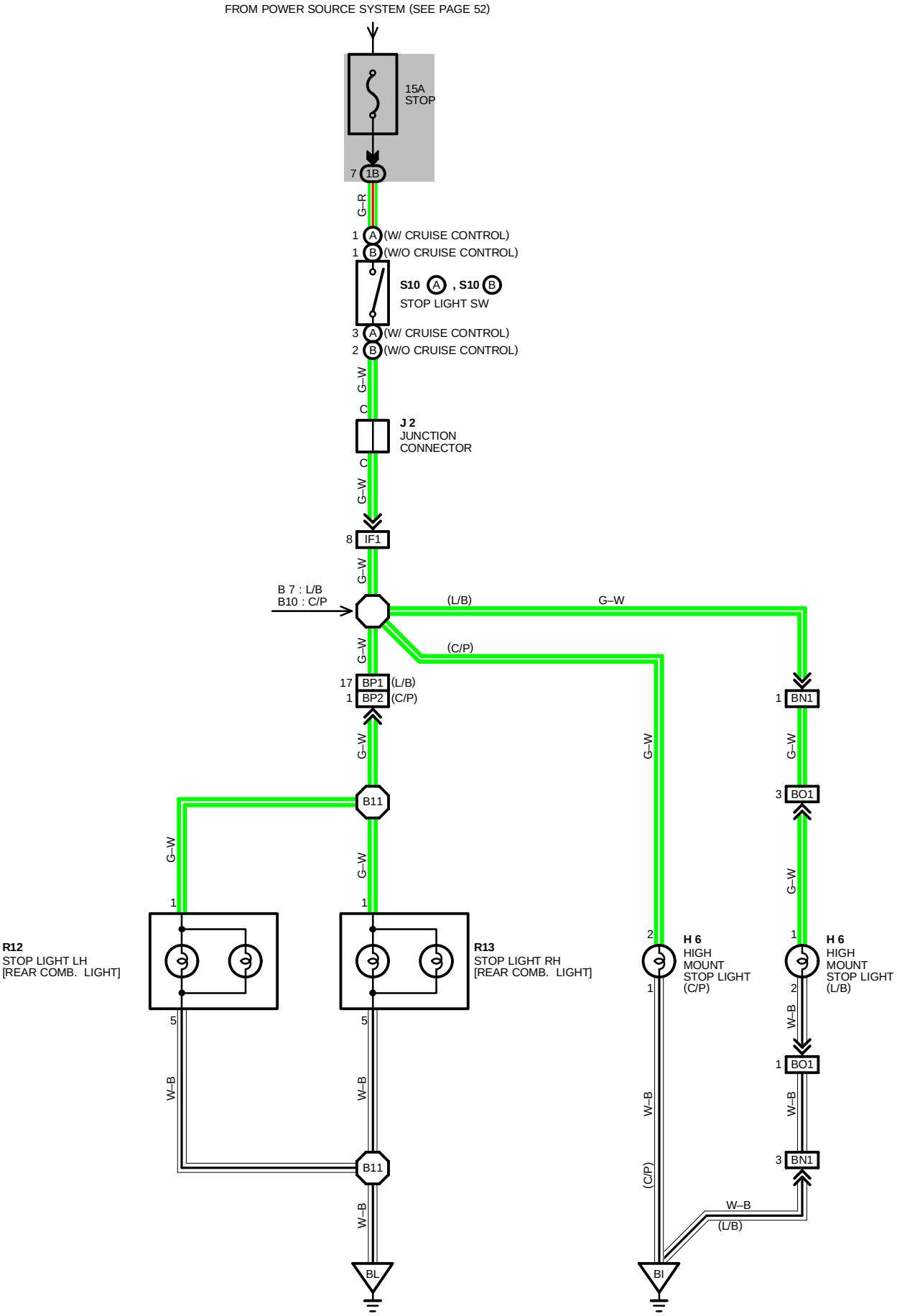


(HINT : SEE PAGE 7)

R10



STOP LIGHT


FROM POWER SOURCE SYSTEM (SEE PAGE 52)
15A
STOP
7 1B
G–R
1 A (W/ CRUISE CONTROL)
1 B (W/O CRUISE CONTROL)
S10 A , S10 B
STOP LIGHT SW
3 A (W/ CRUISE CONTROL)
2 B (W/O CRUISE CONTROL)
G–W
C
J 2
JUNCTION
CONNECTOR
C
G–W
8 IF1
G–W
B 7 : L/B
B10 : C/P
(L/B)
G–W
G–W
(C/P)
17 BP1 (L/B)
1 BP2 (C/P)
G–W
B11
G–W
1
1
R12
STOP LIGHT LH
[REAR COMB. LIGHT]
R13
STOP LIGHT RH
[REAR COMB. LIGHT]
5
5
W–B
W–B
B11
W–B
BL
G–W
2
1
H 6
HIGH
MOUNT
STOP LIGHT
(C/P)
W–B
(C/P)
BI
1 BN1
G–W
3 BO1
G–W
1
2
H 6
HIGH
MOUNT
STOP LIGHT
(L/B)
W–B
1 BO1
W–B
3 BN1
W–B
(L/B)

SERVICE HINTS

S10 STOP LIGHT SW

1–3: CLOSED WITH BRAKE PEDAL DEPRESSED (W/ CRUISE CONTROL)

1–2: CLOSED WITH BRAKE PEDAL DEPRESSED (W/O CRUISE CONTROL)

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE		SEE PAGE
H 6	30 (L/B), 31 (C/P)	**R12**	30 (L/B), 31 (C/P)	**S10**	A	29
J 2	29	**R13**	30 (L/B), 31 (C/P)		B	29

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IF1	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
BN1	38 (L/B)	FRAME WIRE AND SEAT WIRE (UNDER THE DRIVER'S SEAT)
BO1	38 (L/B)	BACK DOOR NO. 1 WIRE AND BACK DOOR NO. 1 SUB WIRE (BACK DOOR UPPER LEFT)
BP1	38 (L/B)	FLOOR WIRE AND LUGGAGE ROOM WIRE (LEFT QUARTER PANEL CENTER)
BP2	40 (C/P)	FLOOR WIRE AND LUGGAGE ROOM WIRE (LUGGAGE COMPARTMENT LEFT)

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
BI	38 (L/B)	UNDER THE LEFT CENTER PILLAR
BL	38 (L/B)	BACK PANEL CENTER
	40 (C/P)	

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
B 7	38 (L/B)	FLOOR WIRE	**B10**	40 (C/P)	FLOOR WIRE
	40 (C/P)		**B11**	38 (L/B)	LUGGAGE ROOM WIRE
B10	38 (L/B)			40 (C/P)	

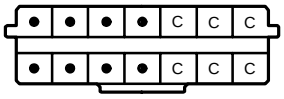
(C/P) **H 6**



(L/B) **H 6**

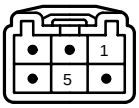


J 2



(HINT : SEE PAGE 7)

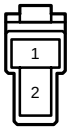
R12, R13



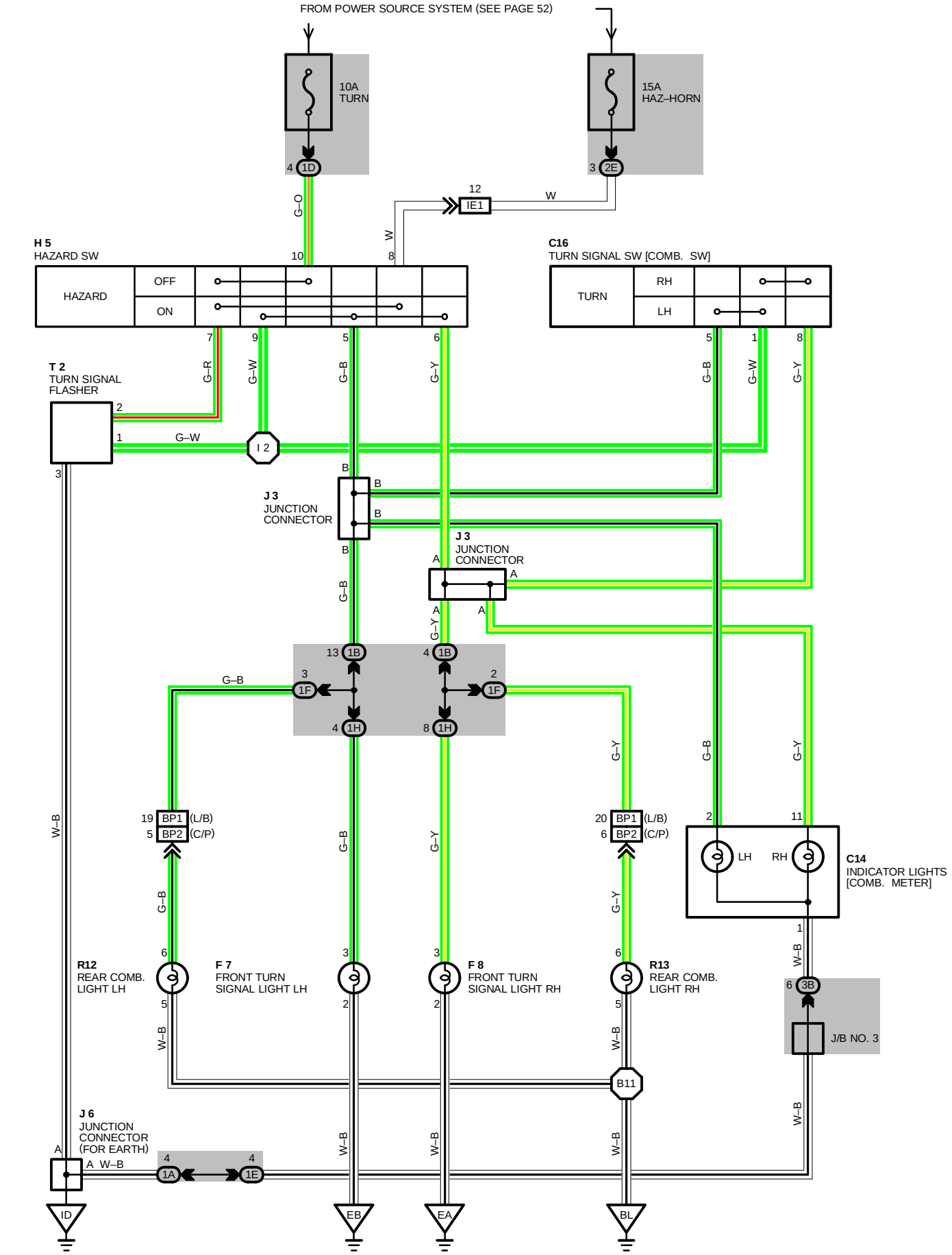
(W/ CRUISE CONTROL) **S10** A



(W/O CRUISE CONTROL) **S10** B



TURN SIGNAL AND HAZARD WARNING LIGHT



SERVICE HINTS

T 2 TURN SIGNAL FLASHER

2–GROUND : APPROX. **12** VOLTS WITH IGNITION SW ON OR HAZARD SW ON

1–GROUND : CHANGES FROM **12** TO **0** VOLTS WITH IGNITION SW ON AND TURN SIGNAL SW LEFT OR RIGHT, OR WITH HAZARD SW ON

3–GROUND : ALWAYS CONTINUITY

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C14	28	**H 5**	29	**R13**	30 (L/B), 31 (C/P)
C16	28	**J 3**	29	**T 2**	29
F 7	26 (5S–FE), 27 (4A–FE)	**J 6**	29		
F 8	26 (5S–FE), 27 (4A–FE)	**R12**	30 (L/B), 31 (C/P)		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1B		
1D		
1E		
1F	18	FLOOR WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO.2 (NEAR THE BATTERY)
3B	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IE1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
BP1	38 (L/B)	FLOOR WIRE AND LUGGAGE ROOM WIRE (LEFT QUARTER PANEL CENTER)
BP2	40 (C/P)	FLOOR WIRE AND LUGGAGE ROOM WIRE (LUGGAGE COMPARTMENT LEFT)

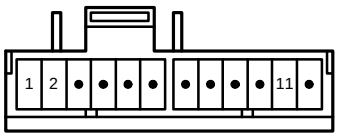
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (5S–FE)	FRONT RIGHT FENDER
	34 (4A–FE)	
EB	32 (5S–FE)	FRONT LEFT FENDER
	34 (4A–FE)	
ID	36	LEFT KICK PANEL
BL	38 (L/B)	BACK PANEL CENTER
	40 (C/P)	

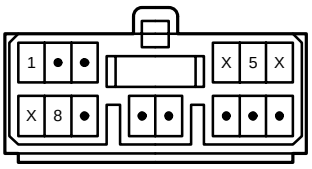
: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 2	36	COWL WIRE	**B11**	40 (C/P)	LUGGAGE ROOM WIRE
B11	38 (L/B)	LUGGAGE ROOM WIRE			

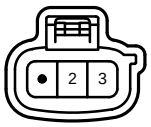
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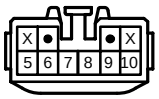
C16 BLACK



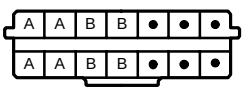
F 7, F 8 BLACK



H 5 BLACK

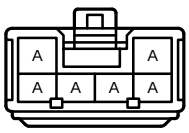


J 3



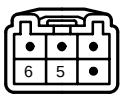
(HINT : SEE PAGE 7)

J 6

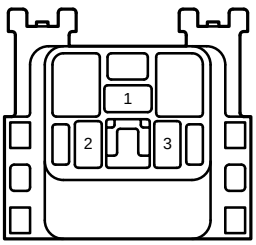


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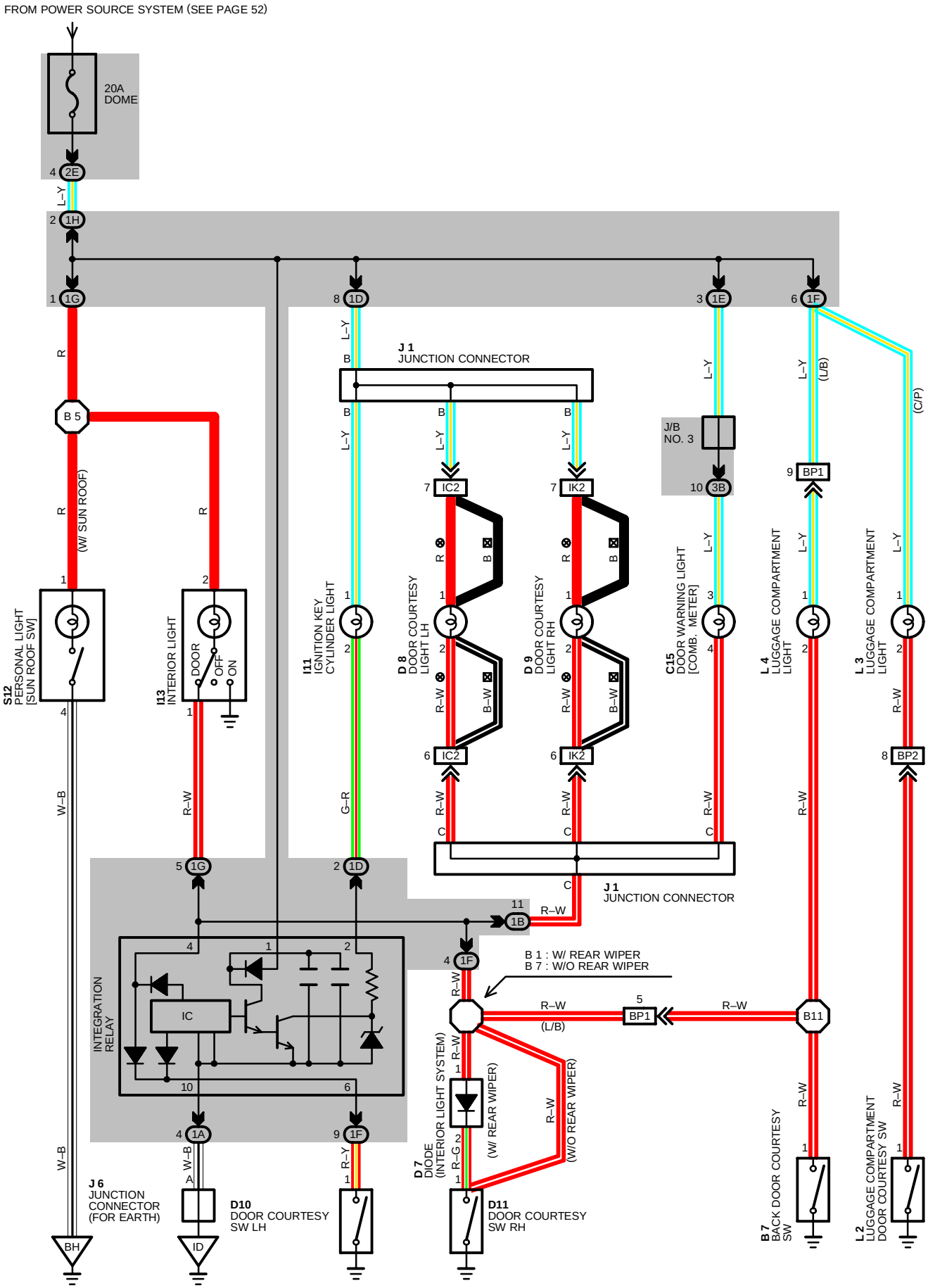
R12, R13



T 2



⊗ W/ DOOR LOCK
⊠ W/O DOOR LOCK



SERVICE HINTS

INTEGRATION RELAY
(1B) 11–GROUND : APPROX. **12** VOLTS WITH DOOR CLOSED
0 VOLTS WITH EACH DOOR OPEN

D10, D11 DOOR COURTESY SW
1–GROUND : CLOSED WITH DOOR OPEN

L 2 LUGGAGE COMPARTMENT LIGHT SW
1–GROUND : CLOSED WITH LUGGAGE COMPARTMENT DOOR OPEN

B 7 BACK DOOR COURTESY SW
1–GROUND : CLOSED WITH BACK DOOR OPEN

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
B 7	30 (L/B)	**D10**	30 (L/B), 31 (C/P)	**J 6**	29
C15	28	**D11**	30 (L/B), 31 (C/P)	**L 2**	31 (C/P)
D 7	30 (L/B), 31 (C/P)	**I11**	29	**L 3**	31 (C/P)
D 8	30 (L/B), 31 (C/P)	**I13**	30 (L/B), 31 (C/P)	**L 4**	30 (L/B)
D 9	30 (L/B), 31 (C/P)	**J 1**	29	**S12**	30 (L/B), 31 (C/P)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1B		
1D		
1E		
1F	18	FLOOR WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1G	18	ROOF WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
3B	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC2	36	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
IK2	36	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
BP1	38 (L/B)	FLOOR WIRE AND LUGGAGE ROOM WIRE (LEFT QUARTER PANEL CENTER)
BP2	40 (C/P)	FLOOR WIRE AND LUGGAGE ROOM WIRE (LUGGAGE COMPARTMENT LEFT)

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL
BH	38 (L/B)	ROOF LEFT

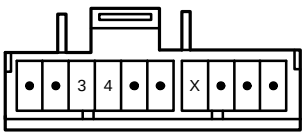
: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
B 1	38 (L/B)	FLOOR WIRE	**B 7**	38 (L/B)	FLOOR WIRE
	40 (C/P)			40 (C/P)	
B 5	38 (L/B)	ROOF WIRE	**B11**	38 (L/B)	LUGGAGE ROOM WIRE
	40 (C/P)			40 (C/P)	

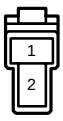
B 7, L 2 GRAY



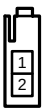
C15 GRAY



D 7



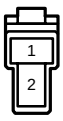
D 8, D 9



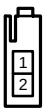
D10, D11



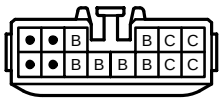
I11



I13

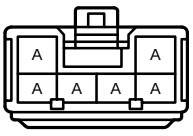


J 1



(HINT : SEE PAGE 7)

J 6



(HINT : SEE PAGE 7)

L 3 GRAY



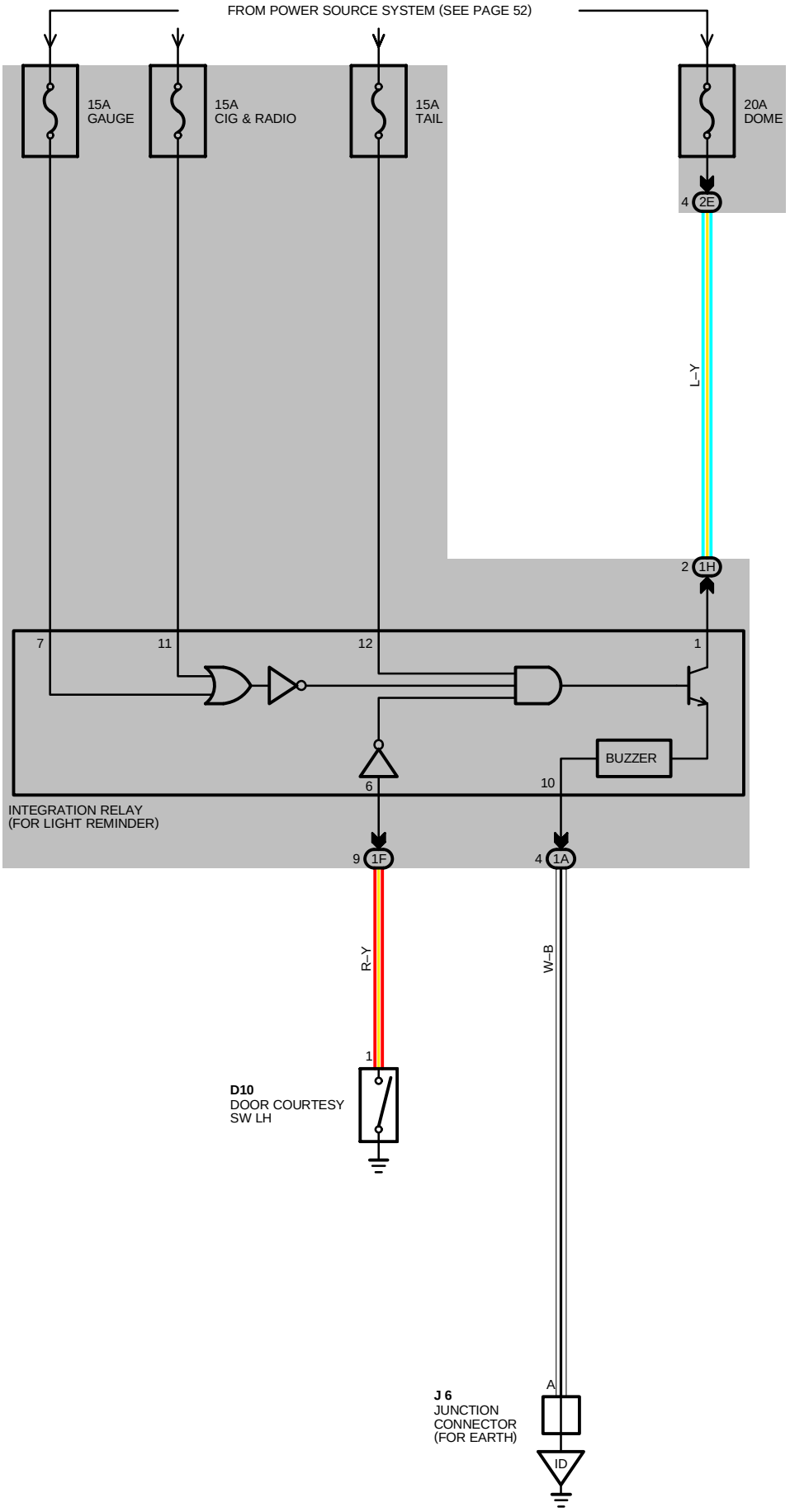
L 4



S12



LIGHT REMINDER BUZZER



SYSTEM OUTLINE

CURRENT ALWAYS FLOWS TO **TERMINAL 1** OF THE LIGHT REMINDER RELAY THROUGH THE DOME FUSE.

WITH THE IGNITION SW IN **ACC** POSITION, CURRENT FLOWS TO **TERMINAL 11** OF THE LIGHT REMINDER RELAY. WHEN THE IGNITION SW IS TURNED TO **ON** POSITION, CURRENT FLOWS TO **TERMINAL 7** THE LIGHT REMINDER RELAY. WHEN THE LIGHT CONTROL SW IS TURNED TO **TAIL** OR **HEAD** POSITION, CURRENT IS APPLIED TO **TERMINAL 12** THE LIGHT REMINDER RELAY.

LIGHT REMINDER SYSTEM

WHEN THE LIGHT CONTROL SW IN **TAIL** OR **HEAD** POSITION, THE IGNITION SW IS TURNED TO **OFF** FROM **ON** POSITION, AND THE DRIVER'S DOOR IS OPENED (DOOR COURTESY SW ON), THE CURRENT FLOW TO **TERMINAL 7** AND **11** OF THE LIGHT REMINDER RELAY STOPS. AS A RESULT, THE RELAY IS ACTIVATED AND CURRENT FLOWS FROM **TERMINAL 1** OF THE RELAY → **TERMINAL 10** → T0 **GROUND**, SOUNDING THE LIGHT REMINDER BUZZER.

SERVICE HINTS

LIGHT REMINDER RELAY

7–GROUND : APPROX. **12** VOLTS WITH IGNITION SW ON
11–GROUND : APPROX. **12** VOLTS WITH IGNITION SW ON
12–GROUND : APPROX. **12** VOLTS WITH LIGHT CONTROL SW AT **TAIL** OR **HEAD** POSITION
6–GROUND : CONTINUITY WITH DRIVER'S DOOR OPEN
1–GROUND : ALWAYS APPROX. **12** VOLTS
10–GROUND : ALWAYS CONTINUITY

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
D10	30 (L/B), 31 (C/P)	**J 6**	29		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1D		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)

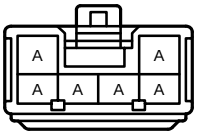
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL

D10

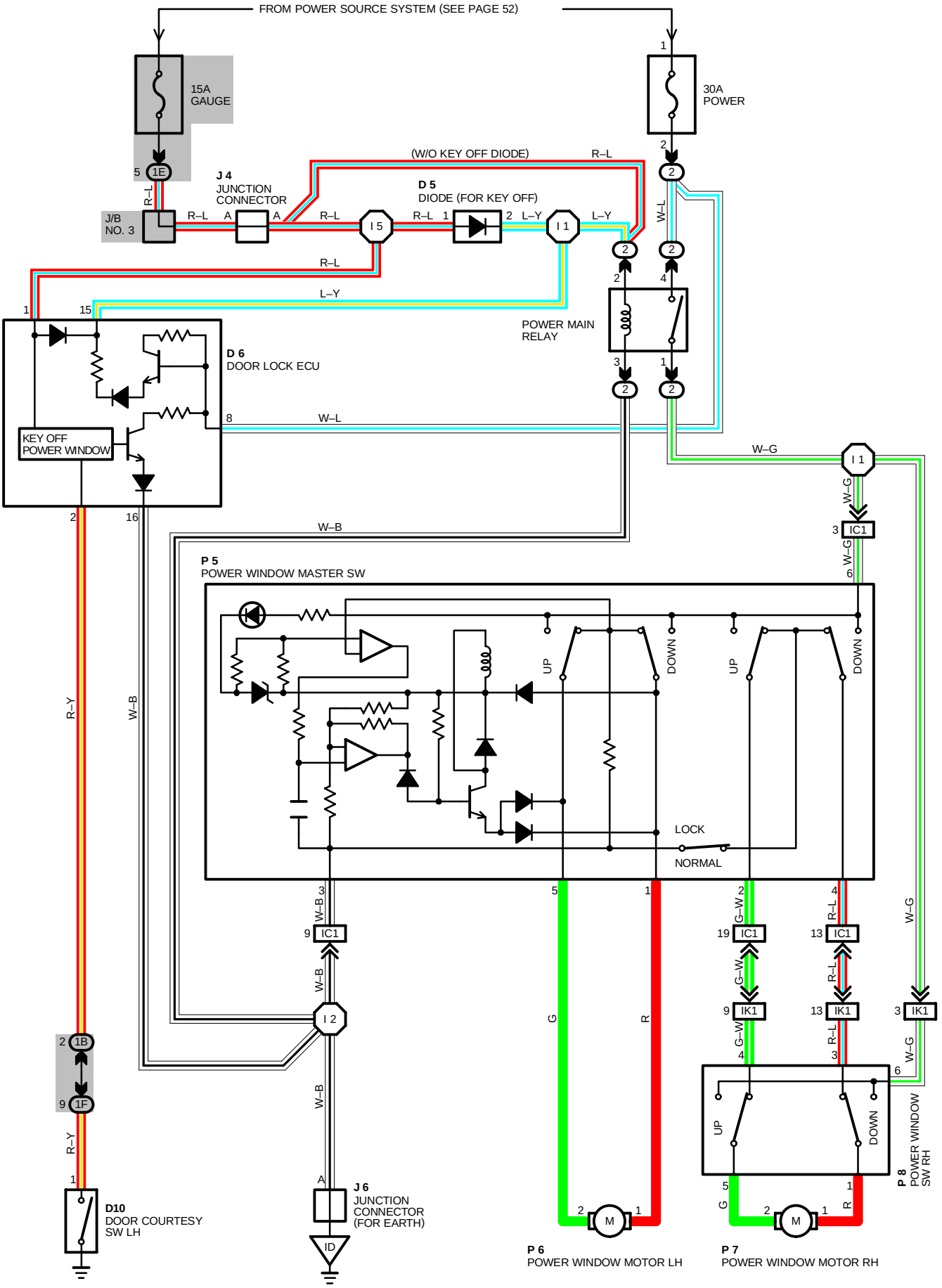


J 6



(HINT : SEE PAGE 7)

POWER WINDOW



SYSTEM OUTLINE

CURRENT ALWAYS FLOWS **TERMINAL 4** OF THE POWER MAIN RELAY THROUGH THE POWER FUSE. WITH THE IGNITION SW TURNED ON, CURRENT FLOWS THROUGH THE GAUGE FUSE TO **TERMINAL 2** OF THE POWER MAIN RELAY → **TERMINAL 3** → TO **GROUND**. THIS ACTIVATES THE RELAY AND CURRENT FLOWING TO **TERMINAL 1** OF THE POWER MAIN RELAY → TO **TERMINAL 6** OF THE POWER WINDOW MASTER SW AND **TERMINAL 5** OF THE POWER WINDOW SW RH (PASSENGER'S).

1. MANUAL UP OPERATION (DRIVER'S WINDOW)

WITH THE IGNITION SW TURNED ON AND WITH THE POWER WINDOW MASTER SW IN **UP** POSITION, THE CURRENT FLOWING TO **TERMINAL 6** OF THE POWER WINDOW MASTER SW FLOWS TO **TERMINAL 5** OF THE MASTER SW → **TERMINAL 2** OF THE POWER WINDOW MOTOR LH (DRIVER'S) → MOTOR → **TERMINAL 1** → **TERMINAL 1** OF THE MASTER SW → **TERMINAL 3** → TO **GROUND** AND CAUSES THE POWER WINDOW MOTOR TO ROTATE IN THE UP DIRECTION. THE WINDOW ASCENDS ONLY WHILE THE SW IS BEING PUSHED. IN DOWN OPERATION, THE FLOW OF CURRENT FROM **TERMINAL 6** OF THE POWER WINDOW MASTER SW TO **TERMINAL 1** OF THE MASTER SW CAUSES THE FLOW OF CURRENT FROM **TERMINAL 1** OF THE MOTOR → MOTOR → **TERMINAL 2** → **TERMINAL 5** OF THE MASTER SW → **TERMINAL 3** → TO **GROUND**, FLOWING IN THE OPPOSITE DIRECTION TO MANUAL UP OPERATION AND CAUSING THE MOTOR TO ROTATE IN REVERSE, LOWERING THE WINDOW.

2. AUTO DOWN OPERATION

WITH THE IGNITION SW ON AND WITH THE DRIVER'S SW OF THE POWER WINDOW MASTER SW IN **DOWN** POSITION, CURRENT FLOWING TO **TERMINAL 6** OF THE MASTER SW FLOWS TO **TERMINAL 1** OF THE MASTER SW → **TERMINAL 1** OF THE POWER WINDOW MOTOR → MOTOR → **TERMINAL 2** → **TERMINAL 5** OF THE MASTER SW → **TERMINAL 3** → TO **GROUND**, CAUSING THE MOTOR TO ROTATE TOWARDS THE DOWN SIDE. THEN THE SOLENOID IN THE MASTER SW IS ACTIVATED AND IT LOCKS THE DRIVER'S SW BEING PUSHED, CAUSING THE MOTOR TO CONTINUE TO ROTATE IN AUTO DOWN OPERATION.

WHEN THE WINDOW HAS COMPLETELY DESCENDED, THE CURRENT FLOW BETWEEN **TERMINAL 5** OF THE MASTER SW AND **TERMINAL 3** INCREASES. AS A RESULT, THE SOLENOID STOPS OPERATING, THE DRIVER'S SW TURNS OFF AND FLOW FROM **TERMINAL 6** OF THE MASTER SW TO **TERMINAL 1** IS CUT OFF, STOPPING THE MOTOR SO THAT AUTO STOP OCCURS.

3. STOPPING OF AUTO DOWN AT DRIVER'S WINDOW

WHEN THE DRIVER'S SW IS PUSHED TO THE UP SIDE DURING AUTO DOWN OPERATION, A GROUND CIRCUIT OPENS IN THE MASTER SW AND CURRENT DOES NOT FLOW FROM **TERMINAL 5** OF THE MASTER SW → TO **TERMINAL 3,** SO THE MOTOR STOPS, CAUSING AUTO DOWN OPERATION TO STOP. IF THE DRIVER'S SW IS PUSHED CONTINUOUSLY, THE MOTOR ROTATES IN THE UP DIRECTION IN MANUAL UP OPERATION.

4. MANUAL OPERATION BY POWER WINDOW SW (PASSENGER'S WINDOW)

WITH POWER WINDOW SW (PASSENGER'S) PUSHED TO THE UP SIDE, CURRENT FLOWING FROM **TERMINAL 6** OF THE POWER WINDOW SW FLOWS TO **TERMINAL 5** OF THE POWER WINDOW SW → **TERMINAL 2** OF THE WINDOW MOTOR → MOTOR → **TERMINAL 1** → **TERMINAL 1** OF THE POWER WINDOW SW → **TERMINAL 3** → **TERMINAL 4** OF THE MASTER SW → **TERMINAL 3** → TO **GROUND** AND CAUSES THE POWER WINDOW MOTOR (PASSENGER'S) TO ROTATE IN THE UP DIRECTION. UP OPERATION CONTINUES ONLY WHILE THE POWER WINDOW SW IS PUSHED TO THE UP SIDE. WHEN THE WINDOW DESCENDS, THE CURRENT FLOWING TO THE MOTOR FLOWS IN THE OPPOSITE DIRECTION, FLOM **TERMINAL 1** → MOTOR → TO **TERMINAL 2**, AND THE MOTOR ROTATES IN REVERSE. WHEN THE WINDOW LOCK SW IS PUSHED TO THE LOCK SIDE, THE GROUND CIRCUIT TO THE PASSENGER'S WINDOW BECOMES OPEN.

AS A RESULT, EVEN IF OPEN/CLOSE OPERATION OF THE PASSENGER'S WINDOW IS TRIED, THE CURRENT FROM **TERMINAL 6** OF THE POWER WINDOW MASTER SW IS NOT GROUNDED AND THE MOTOR DOES NOT ROTATE, SO THE PASSENGER'S WINDOW CAN NOT BE OPERATED AND WINDOW LOCK OCCURS.

5. KEY OFF POWER WINDOW OPERATION

WITH THE IGNITION SW TURNED FROM ON TO OFF, THE DOOR CONTROL RELAY OPERATES AND CURRENT FLOWS FROM POWER FUSE → **TERMINAL 8** OF THE DOOR CONTROL RELAY → **TERMINAL 15** → **TERMINAL 2** OF THE POWER MAIN RELAY → **TERMINAL 3** → TO **GROUND** FOR ABOUT **60** SECONDS. THE SAME AS NORMAL OPERATION, THE CURRENT FLOWS FROM POWER FUSE → **TERMINAL 4** OF THE POWER MAIN RELAY → **TERMINAL 1** → **TERMINAL 6** OF THE POWER WINDOW MASTER SW AND **TERMINAL 1** OF THE POWER MAIN RELAY → TO **TERMINAL 6** OF POWER WINDOW SW RH (PASSENGER'S). AS A RESULT, FOR ABOUT **60** SECONDS AFTER THE IGNITION SW IS TURNED OFF. IT IS POSSIBLE TO RAISE AND LOWER THE POWER WINDOW BY THE FUNCTIONING OF THIS RELAY. ALSO, BY OPENING THE DOOR (DOOR COURTESY SW ON) WITHIN ABOUT **60** SECONDS AFTER TURNING THE IGNITION SW TO OFF. A SIGNAL IS INPUT TO **TERMINAL 2** OF DOOR CONTROL RELAY. AS A RESULT, THE RELAY TURNS OFF AND UP AND DOWN OF THE MOVEMENT OF THE WINDOWS STOPS.

POWER WINDOW

SERVICE HINTS

D 6 DOOR LOCK ECU

8–GROUND : ALWAYS APPROX. **12** VOLTS
16–GROUND: ALWAYS CONTINUITY
1–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION
2–GROUND : CONTINUITY WITH DOOR OPENED
15–GROUND: APPROX. **12** VOLTS WITH IGNITION SW ON AND STAYS AT **12** VOLTS FOR **60** SECONDS AFTER THE IGNITION SW IS TURNED OFF, BUT IF A DOOR IS OPENED IN THIS **60** SECONDS PERIOD, VOLTAGE WILL DROP TO **0** VOLTS

D10 DOOR COURTESY SW

1–GROUND: CONTINUITY WITH DOOR OPEN

P 8 POWER WINDOW SW (PASSENGER'S)

6–GROUND: APPROX. **12** VOLTS WITH IGNITION SW ON AND STAYS AT **12** VOLTS FOR **60** SECONDS AFTER THE IGNITION SW IS TURNED OFF, BUT IF A DOOR IS OPENED IN THIS **60** SECONDS PERIOD, VOLTAGE WILL DROP TO **0** VOLTS

P 5 POWER WINDOW MASTER SW

3–GROUND : ALWAYS CONTINUITY
6–GROUND : APPROX. **12** VOLTS WITH IGNITION SW ON AND STAYS AT **12** VOLTS FOR **60** SECONDS AFTER THE IGNITION SW IS TURNED OFF, BUT IF A DOOR IS OPENED IN THIS **60** SECONDS PERIOD, VOLTAGE WILL DROP TO **0** VOLTS
5–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION AND MASTER SW AT **UP** POSITION
1–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION AND MASTER SW AT **DOWN** OR **AUTO DOWN** POSITION

WINDOW LOCK SW

OPEN WITH WINDOW LOCK SW AT **LOCK** POSITION

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
D 5	28	**J 4**	29	**P 6**	30 (L/B), 31 (C/P)
D 6	28	**J 6**	29	**P 7**	30 (L/B), 31 (C/P)
D10	30 (L/B), 31 (C/P)	**P 5**	30 (L/B), 31 (C/P)	**P 8**	30 (L/B), 31 (C/P)

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	23	R/B NO. 2 (LEFT KICK PANEL)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
1F	18	FLOOR WIRE AND J/B NO. 1 (LEFT KICK PANEL)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

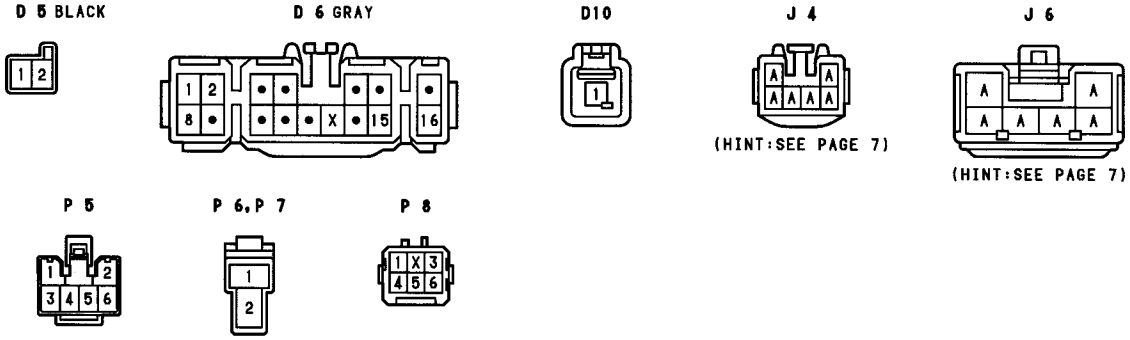
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC1	36	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
IK1	36	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)

: GROUND POINTS

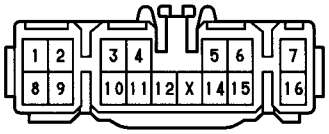
CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 1	36	COWL WIRE	**I 5**	36	COWL WIRE
I 2					



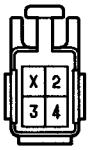
D 6 GRAY



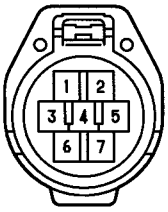
D10, D11



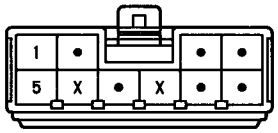
D12, D13



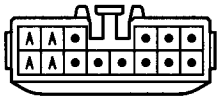
D14, D15 GRAY



I12 BLACK



J 1



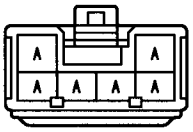
(HINT:SEE PAGE 7)

J 4



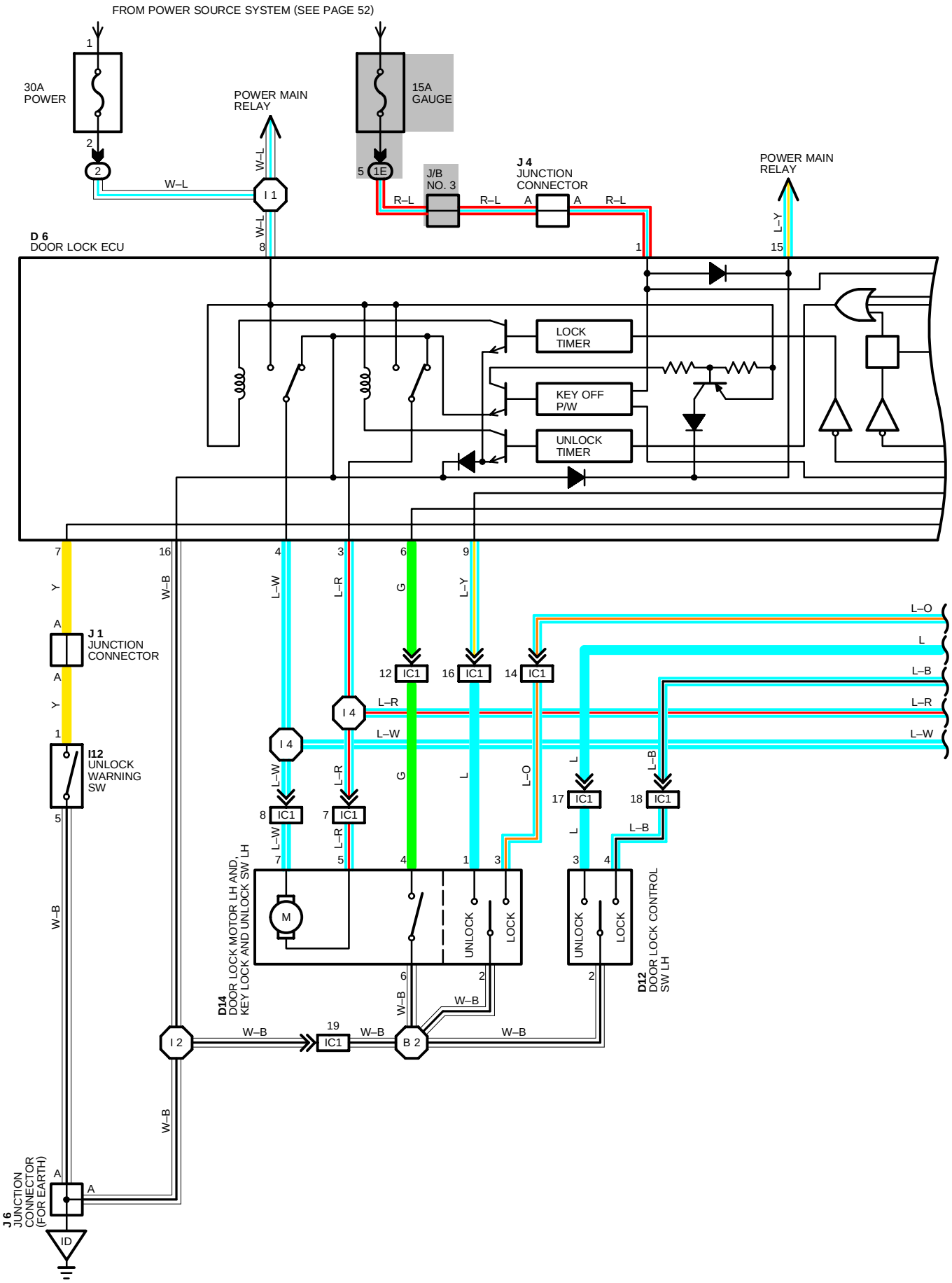
(HINT:SEE PAGE 7)

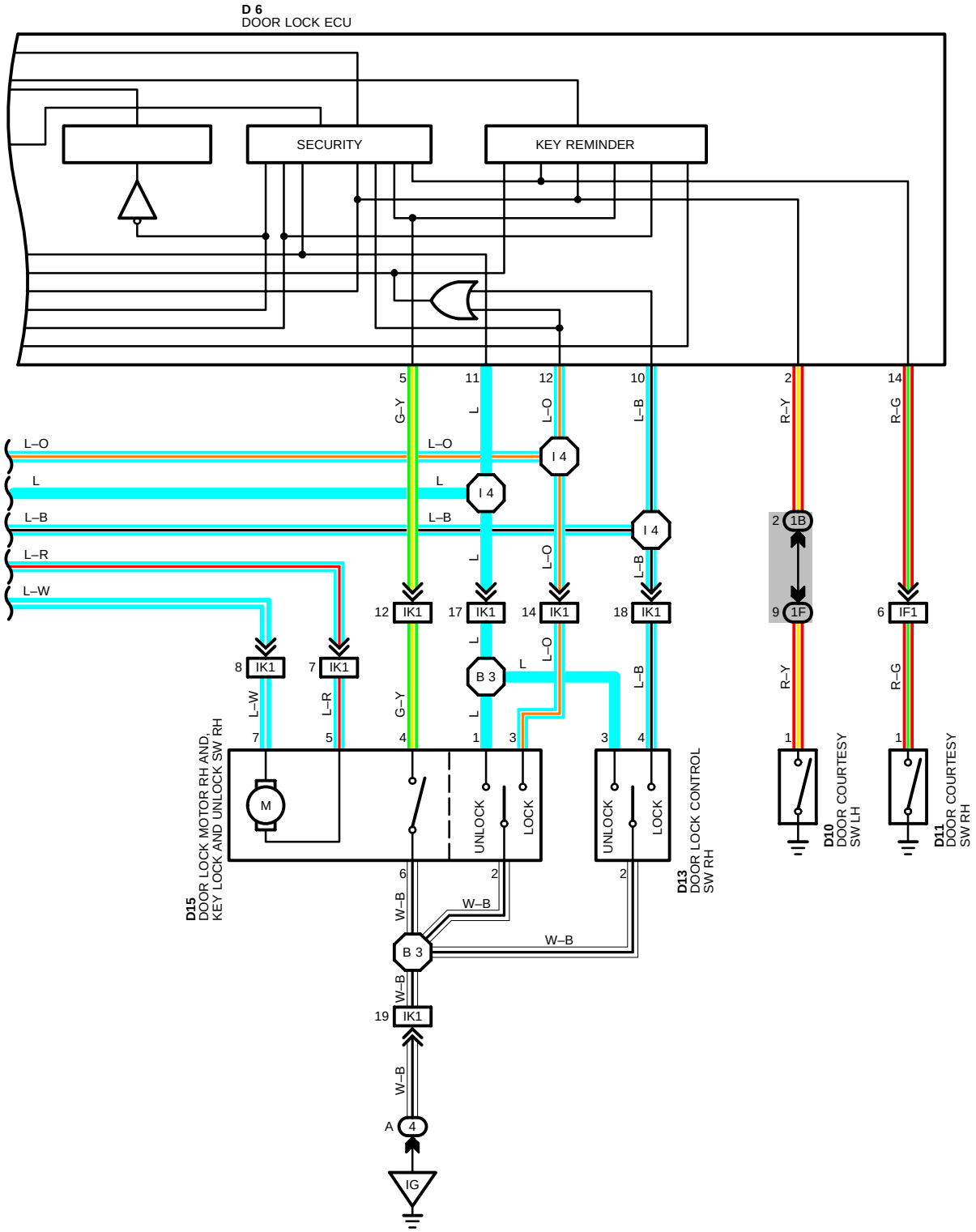
J 6



(HINT:SEE PAGE 7)

DOOR LOCK


FROM POWER SOURCE SYSTEM (SEE PAGE 52)
30A POWER
POWER MAIN RELAY
15A GAUGE
J/B NO. 3
J 4 JUNCTION CONNECTOR
POWER MAIN RELAY
D 6 DOOR LOCK ECU
LOCK TIMER
KEY OFF P/W
UNLOCK TIMER
J 1 JUNCTION CONNECTOR
I12 UNLOCK WARNING SW
D14 DOOR LOCK MOTOR LH AND, KEY LOCK AND UNLOCK SW LH
D12 DOOR LOCK CONTROL SW LH
J 6 JUNCTION CONNECTOR (FOR EARTH)
M
UNLOCK
LOCK


D 6
DOOR LOCK ECU
SECURITY
KEY REMINDER
L–O
L
L–B
L–R
L–W
G–Y
R–Y
R–G
W–B
I 4
B 3
IK1
IF1
1B
1F
M
UNLOCK
LOCK
D15
DOOR LOCK MOTOR RH AND,
KEY LOCK AND UNLOCK SW RH
D13
DOOR LOCK CONTROL
SW RH
D10
DOOR COURTESY
SW LH
D11
DOOR COURTESY
SW RH
IG

DOOR LOCK

SYSTEM OUTLINE

CURRENT ALWAYS FLOWS TO **TERMINAL 8** OF THE DOOR LOCK CONTROL RELAY AND **TERMINAL 4** OF THE POWER MAIN RELAY THROUGH POWER FUSE.

1. MANUAL LOCK OPERATION

TO CHANGE DOOR LOCK SW AND KEY SW TO **LOCK** POSITION, A LOCK SIGNAL IS INPUT TO **TERMINAL 10**, **12** OF THE DOOR LOCK CONTROL RELAY AND CAUSES THE RELAY TO FUNCTION. CURRENT FLOWS FROM **TERMINAL 8** OF THE RELAY → **TERMINAL 4** → **TERMINAL 7** OF THE DOOR LOCK MOTOR → **TERMINAL 5** → **TERMINAL 3** OF THE RELAY → **TERMINAL 16** → TO **GROUND** AND DOOR LOCK SOLENOID CAUSES THE DOOR TO LOCK.

2. MANUAL UNLOCK OPERATION

TO CHANGE DOOR LOCK CONTROL SW AND KEY SW RH TO **UNLOCK** POSITION, AN UNLOCK SIGNAL IS INPUT TO **TERMINAL 11** OF THE DOOR LOCK CONTROL RELAY AND CAUSES THE RELAY TO FUNCTION. CURRENT FLOWS FROM **TERMINAL 8** OF THE RELAY → **TERMINAL 3** → **TERMINAL 5** OF THE DOOR LOCK MOTOR → **TERMINAL 7** → **TERMINAL 4** OF THE RELAY → **TERMINAL 16** → TO **GROUND** AND DOOR LOCK SOLENOID CAUSES DOOR TO UNLOCK.

3. DOUBLE OPERATION UNLOCK OPERATION

WHEN THE DOOR LOCK KEY SW (DRIVER'S) IS TURNED TO THE UNLOCK SIDE, ONLY THE DRIVER'S DOOR IS MECHANICALLY UNLOCKED. TURNING THE DOOR LOCK KEY SW (DRIVER'S) TO THE UNLOCK SIDE CAUSES A SIGNAL TO BE INPUT TO **TERMINAL 9** OF THE RELAY, AND IF THE SIGNAL IS INPUT AGAIN WITHIN **3** SECONDS BY TURNING THE SWITCH TO THE UNLOCK SIDE AGAIN, CURRENT FLOWS **TERMINAL 3** → **TERMINAL 5** OF DOOR LOCK MOTOR → **TERMINAL 7** → **TERMINAL 4** OF THE RELAY → **TERMINAL 16** → **GROUND**, CAUSING THE DOOR LOCK MOTOR TO OPERATE AND UNLOCK THE PASSENGER'S DOOR.

4. IGNITION KEY REMINDER OPERATION

***** OPERATING DOOR LOCK KNOB (IN DOOR LOCK SOLENOIDS OPERATION)

WITH IGNITION KEY IN CYLINDER (UNLOCK WARNING SW ON), WHEN THE DOOR IS OPENED AND LOCKED USING DOOR LOCK KNOB (DOOR LOCK MOTOR), THE DOOR IS LOCKED ONCE BUT EACH DOOR IS UNLOCKED SOON BY THE FUNCTION OF RELAY. AS A RESULT, THE CURRENT FLOWS FROM **TERMINAL 8** OF THE RELAY → **TERMINAL 3** → **TERMINAL 5** OF THE DOOR LOCK MOTOR → **TERMINAL 7** → **TERMINAL 4** OF THE RELAY → **TERMINAL 16** → TO **GROUND** AND CAUSES ALL THE DOORS TO UNLOCK.

***** OPERATING DOOR LOCK CONTROL SW OR DOOR LOCK KEY SW

WITH IGNITION KEY IN CYLINDER (UNLOCK WARNING SW ON), WHEN THE DOOR IS OPENED AND LOCKED USING DOOR LOCK CONTROL SW OR KEY SW, THE DOOR IS LOCKED ONCE BUT EACH DOOR IS UNLOCK BY THE FUNCTION OF SW CONTAINED IN SOLENOIDS, WHICH THE SIGNAL IS INPUT TO **TERMINAL 6** (DRIVER'S) OR **5** (PASSENGER'S) OF THE RELAY. ACCORDING TO THIS INPUT SIGNAL, THE CURRENT IN RELAY FLOWS FROM **TERMINAL 8** OF THE RELAY → **TERMINAL 3** → **TERMINAL 5** OF THE DOOR LOCK MOTOR → **TERMINAL 7** → **TERMINAL 4** OF THE RELAY → **TERMINAL 16** → TO **GROUND** AND CAUSES ALL THE DOOR TO UNLOCK.

***** IN CASE OF KEY LESS LOCK

WITH IGNITION KEY IN CYLINDER (UNLOCK WARNING SW ON), WHEN THE UNLOCK FUNCTION IS DISTURBED MORE THAN **0.2** SECONDS, FOR EXAMPLE PUSHING THE DOOR LOCK KNOB ETC., THE DOOR HOLDS ON LOCK CONDITION. CLOSING THE DOOR AFTER, DOOR COURTESY SW INPUTS THE SIGNAL INTO **TERMINAL 2** OR **14** OF THE RELAY. BY THIS INPUT SIGNAL, THE RELAY WORKS AND CURRENT FLOWS FROM **TERMINAL 8** OF THE RELAY → **TERMINAL 3** → **TERMINAL 5** OF THE DOOR LOCK MOTOR → **TERMINAL 7** → **TERMINAL 4** OF THE RELAY → **TERMINAL 16** → TO **GROUND** AND CAUSES ALL THE DOORS TO UNLOCK.

SERVICE HINTS

D 6 DOOR LOCK ECU

16–GROUND : ALWAYS CONTINUITY
2–GROUND : CONTINUITY WITH DRIVER'S DOOR OPEN
8–GROUND : ALWAYS APPROX. **12** VOLTS
3–GROUND : APPROX. **12** VOLTS **0.2** SECONDS WITH FOLLOWING OPERATION
*DOOR LOCK CONTROL SW UNLOCKED
*DOOR LOCK CONTROL SW LOCKED WITH IGNITION KEY IN CYLINDER AND DRIVER'S DOOR OPEN (IGNITION KEY REMINDER FUNCTION)
*DOOR LOCK KNOB LOCKED WITH IGNITION KEY IN CYLINDER AND DRIVER'S DOOR OPEN (IGNITION KEY REMINDER FUNCTION)
*UNLOCKING THE DRIVER'S, PASSENGER'S DOOR CYLINDER WITH KEY
4–GROUND : APPROX. **12** VOLTS **0.2** SECONDS WITH FOLLOWING OPERATION
*DOOR LOCK CONTROL SW LOCKED
*LOCKING THE DRIVER'S, PASSENGER'S DOOR CYLINDER WITH KEY
10–GROUND : **0** VOLTS WITH DOOR LOCK CONTROL SW LOCKED
14–GROUND : CONTINUITY WITH PASSENGER'S DOOR OPEN
6–GROUND : CONTINUITY WITH DRIVER'S DOOR LOCK KNOB UNLOCKED
5–GROUND : CONTINUITY WITH PASSENGER'S DOOR LOCK KNOB UNLOCKED
11–GROUND : **0** VOLTS WITH DOOR LOCK CONTROL SW UNLOCKED, PASSENGER'S DOOR LOCK CYLINDER UNLOCKED WITH KEY

1–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION
9–GROUND : **0** VOLTS WITH DRIVER'S DOOR LOCK CYLINDER UNLOCKED WITH KEY
15–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION
12–GROUND : **0** VOLTS WITH DRIVER'S, PASSENGER'S DOOR LOCK CYLINDER LOCKED WITH KEY

I12 UNLOCK WARNING SW
1–5 : CLOSED WITH IGNITION KEY IN CYLINDER

D14, D15 KEY LOCK AND UNLOCK SW
1–2 : CLOSED WITH DOOR LOCK CYLINDER UNLOCKED WITH KEY
2–3 : CLOSED WITH DOOR LOCK CYLINDER LOCKED WITH KEY

D10, D11 DOOR COURTESY SW
1–GROUND : CLOSED WITH DOOR OPEN



: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
D 6	28	**D13**	30 (5S–FE), 31 (4A–FE)	**J 1**	29
D10	30 (5S–FE), 31 (4A–FE)	**D14**	30 (5S–FE), 31 (4A–FE)	**J 4**	29
D11	30 (5S–FE), 31 (4A–FE)	**D15**	30 (5S–FE), 31 (4A–FE)	**J 6**	29
D12	30 (5S–FE), 31 (4A–FE)	**I12**	29		



: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	23	R/B NO. 2 (LEFT KICK PANEL)



: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
1F	18	FLOOR WIRE AND J/B NO. 1 (LEFT KICK PANEL)



: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC1	36	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
IK1	36	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)



: GROUND POINTS

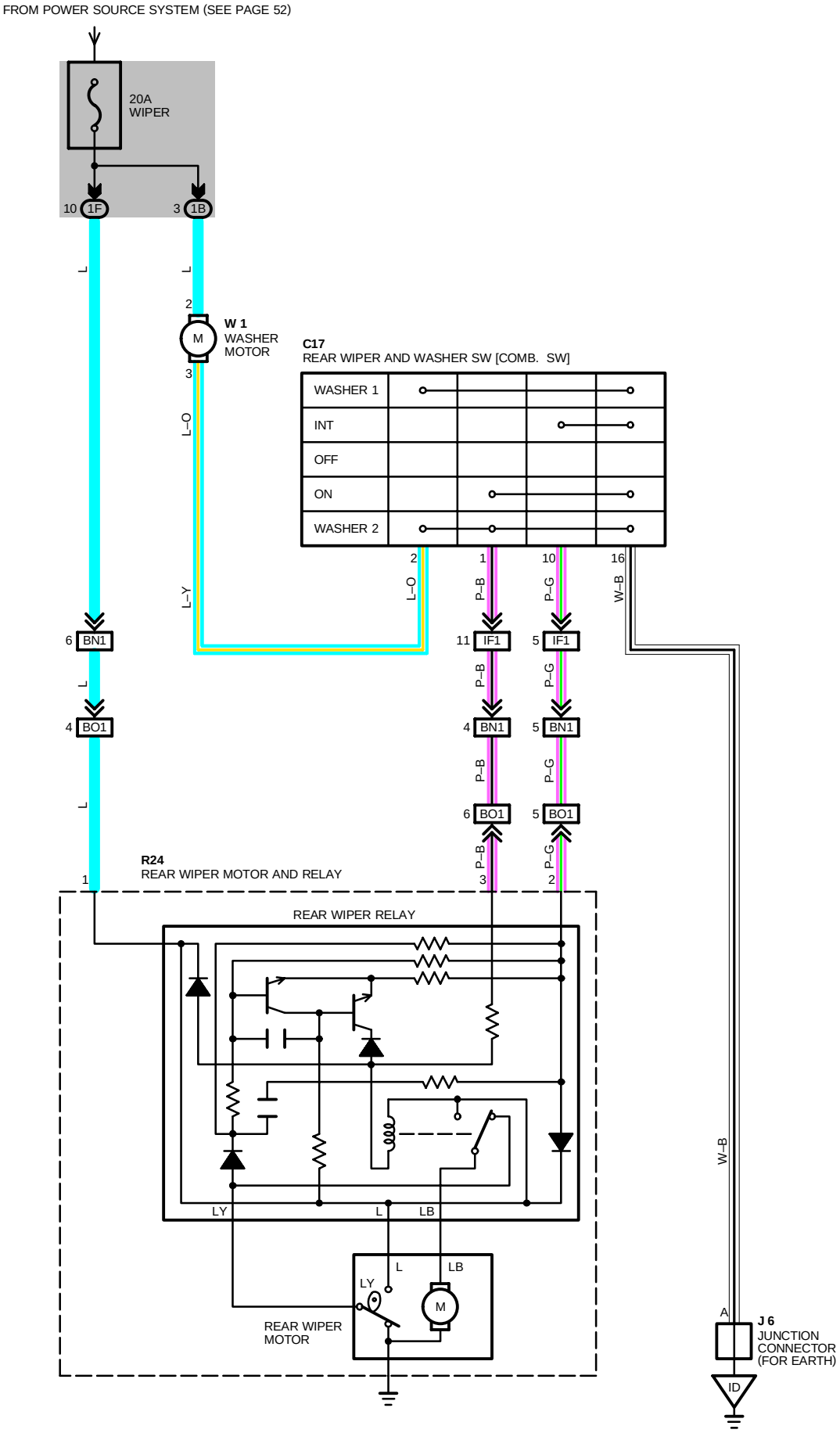
CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL
IG	36	R/B NO. 4 SET BOLT



: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 1	36	COWL WIRE	**B 3**	38 (L/B)	FRONT DOOR RH WIRE
I 2				40 (C/P)	
I 4			**B 4**	38 (L/B)	FRONT DOOR LH WIRE
B 2	38 (L/B)	FRONT DOOR LH WIRE		40 (C/P)	
	40 (C/P)				

REAR WIPER AND WASHER



SYSTEM OUTLINE

WHEN THE IGNITION SW IS TURNED ON, CURRENT FLOWS TO **TERMINAL 2** OF THE REAR WASHER MOTOR, **TERMINAL 1** OF THE REAR WIPER MOTOR AND RELAY THROUGH THE WIPER FUSE.

1. REAR WIPER NORMAL OPERATION

WITH THE IGNITION SW TURNED ON AND REAR WIPER AND WASHER SW TURNED ON, THE CURRENT FLOWING TO **TERMINAL 1** OF THE REAR WIPER RELAY FLOWS TO **TERMINAL 3** OF THE RELAY → **TERMINAL 1** OF THE REAR WIPER AND WASHER SW → **TERMINLA 16** → TO **GROUND**. THUS, THE RELAY COIL IS ACTIVATED AND THE CURRENT TO **TERMINAL 1** OF THE RELAY FLOWS TO **TERMINAL LB** → **TERMINAL LB** OF THE REAR WIPER MOTOR → MOTOR → TO **GROUND** AND CAUSES THE MOTOR TO OPERATE THE WIPER.

2. REAR WIPER INTERMITTENT OPERATION

WHEN THE IGNITION SW IS ON AND THE REAR WIPER AND WASHER SW IS TURNED TO **INT** POSITION, CURRENT FLOWING TO **TERMINAL 1** OF THE REAR WIPER MOTOR AND RELAY FLOWS TO **TERMINAL 2** OF THE RELAY → **TERMINAL 10** OF THE REAR WIPER AND WASHER SW → **TERMINAL 16** → **GROUND**.

THIS CAUSES THE MOTOR TO OPERATE (THE POINT CHANGES) AND THE INTERMITTENT CIRCUIT OF THE RELAY OPERATES. INTERMITTENT OPERATION OF THE CIRCUIT IS CONTROLLED BY THE CHARGING AND DISCHARGING OF THE CONDENSER INSTALLED INSIDE THE RELAY.

3. WASHER OPERATION

WITH THE IGNITION SW TURNED ON AND THE REAR WIPER AND WASHER SW TURNED TO **ON** POSITION, WHEN THE WIPER SW IS TURNED FURTHER, THE CURRENT FLOWING TO **TERMINAL 2** OF THE REAR WASHER MOTOR FLOWS TO **TERMINAL 3** OF THE MOTOR → **TERMINAL 2** OF THE REAR WIPER AND WASHER SW → **TERMINAL 16** → TO **GROUND** SO THAT THE WASHER MOTOR ROTATES AND THE WINDOW WASHER EJECTS THE SPRAY, ONLY WHILE THE SWITCH IS FULLY TURNED.

WHEN THE WIPER SW IS OFF AND THEN TURNED TO WASHER ON (WIPER OFF SIDE), ONLY THE WASHER OPERATES.

SERVICE HINTS

W 1 WASHER MOTOR

2–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION
3–GROUND : CONTINUITY WITH WASHER SW TURNED ON

R24 REAR WIPER MOTOR AND RELAY

1–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION
2–GROUND : CONTINUITY WITH REAR WIPER SW AT **INT** POSITION
3–GROUND : CONTINUITY WITH REAR WIPER SW AT **ON** POSITION

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C17	28	**R24**	30 (L/B)		
J 6	29	**W 1**	26 (5S–FE), 27 (4A–FE)		

⬭ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1F	18	FLOOR WIRE AND J/B NO. 1 (LEFT KICK PANEL)

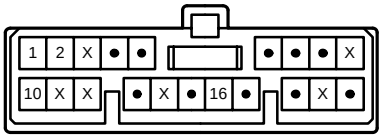
▭ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IF1	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
BN1	38 (L/B)	FRAME WIRE AND SEAT WIRE (UNDER THE DRIVER'S SEAT)
	40 (C/P)	
BO1	38 (L/B)	BACK DOOR NO. 1 WIRE AND BACK DOOR NO. 1 SUB WIRE (BACK DOOR UPPER LEFT)

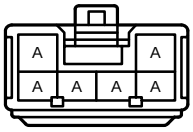
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL

C17 BLACK

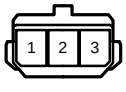


J 6

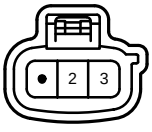


(HINT : SEE PAGE 7)

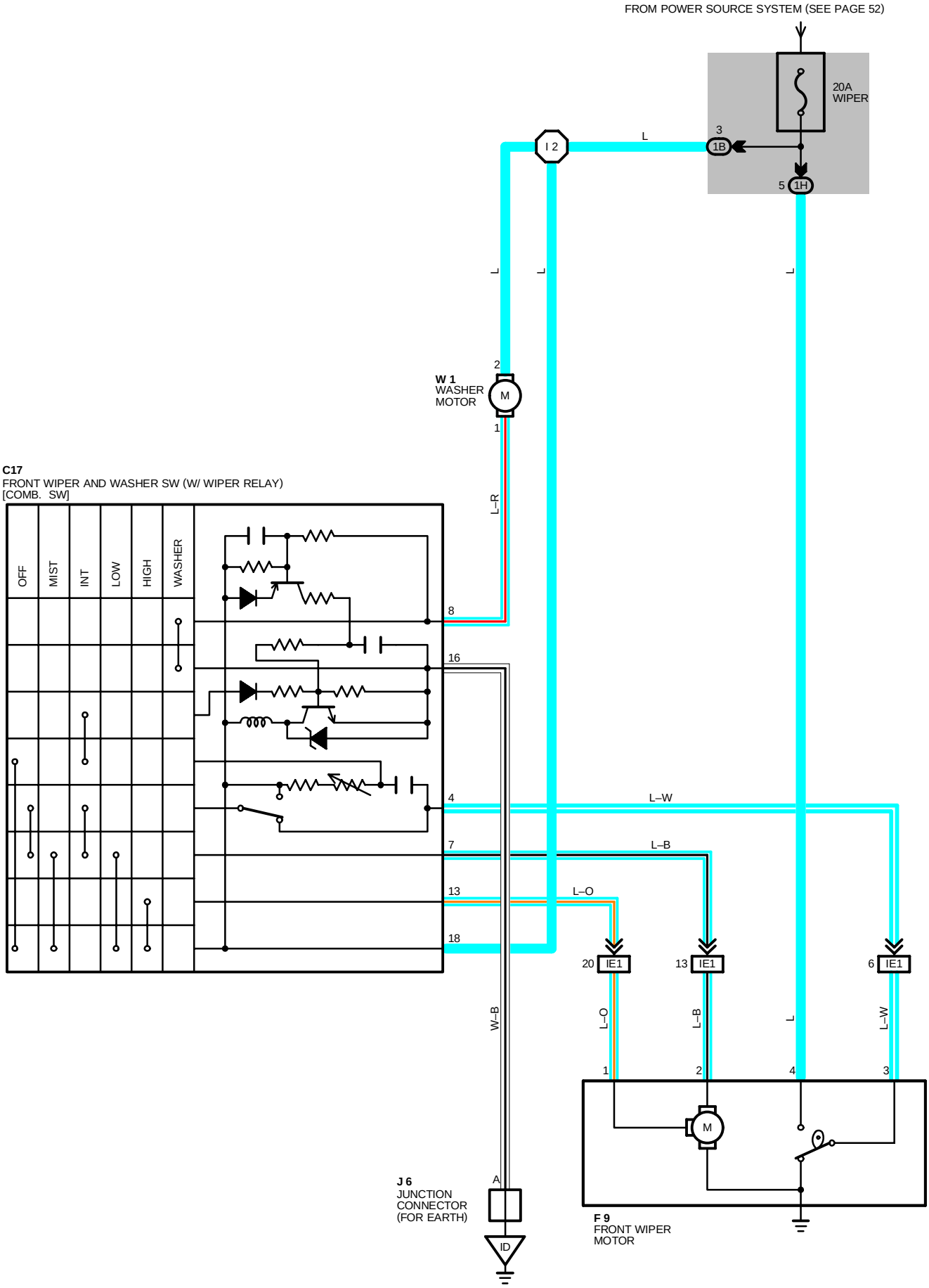
R24



W 1 GRAY



FRONT WIPER AND WASHER



SYSTEM OUTLINE

WITH THE IGNITION SW TURNED ON, THE CURRENT FLOWS TO **TERMINAL 18** OF THE WIPER AND WASHER SW, **TERMINAL 2** OF THE WASHER MOTOR AND **TERMINAL 4** OF THE FRONT WIPER MOTOR THROUGH THE WIPER FUSE.

1. LOW SPEED POSITION

WITH WIPER SW TURNED TO **LOW** POSITION, THE CURRENT FLOWS FROM **TERMINAL 18** OF THE WIPER AND WASHER SW → **TERMINAL 7** → **TERMINAL 2** OF THE FRONT WIPER MOTOR → FRONT WIPER MOTOR → TO **GROUND** AND CAUSES TO THE WIPER MOTOR TO RUN AT LOW SPEED.

2. HIGH SPEED POSITION

WITH WIPER SW TURNED TO **HIGH** POSITION, THE CURRENT FLOWS FROM **TERMINAL 18** OF THE WIPER AND WASHER SW → **TERMINAL 13** → **TERMINAL 1** OF THE FRONT WIPER MOTOR → FRONT WIPER MOTOR → TO **GROUND** AND CAUSES TO THE WIPER MOTOR TO RUN AT HIGH SPEED.

3. INT POSITION (W/ INT SW)

WITH WIPER SW TURNED TO **INT** POSITION, THE RELAY OPERATES AND THE CURRENT WHICH IS CONNECTED BY RELAY FUNCTION FLOWS FROM **TERMINAL 18** OF THE WIPER AND WASHER SW → **TERMINAL 16** → TO **GROUND**. THIS FLOW OF CURRENT OPERATES THE INTERMITTENT CIRCUIT AND THE CURRENT FLOWS FROM **TERMINAL 18** OF THE WIPER AND WASHER SW → **TERMINAL 7** → **TERMINAL 2** OF THE FRONT WIPER MOTOR → FRONT WIPER MOTOR → TO GROUND AND FUNCTIONS.

THE INTERMITTENT OPERATION IS CONTROLLED BY A CONDENSER'S CHARGED AND DISCHARGED FUNCTION INSTALLED IN RELAY AND THE INTERMITTENT TIME IS CONTROLLED BY A TIME CONTROL SW TO CHANGE THE CHARGING TIME OF THE CONDENSER.

4. MIST POSITION (W/ MIST SW)

WITH WIPER SW TURNED TO **MIST** POSITION, THE CURRENT FLOWS FROM **TERMINAL 18** OF THE WIPER AND WASHER SW → **TERMINAL 7** → **TERMINAL 2** OF THE FRONT WIPER MOTOR → FRONT WIPER MOTOR → TO GROUND AND CAUSES TO THE WIPER MOTOR TO RUN AT LOW SPEED.

5. WASHER CONTINUOUS OPERATION (W/ INT CONTROL)

WITH WASHER SW TURNED TO ON, THE CURRENT FLOWS FROM **TERMINAL 2** OF THE WASHER MOTOR → **TERMINAL 1** → **TERMINAL 8** OF THE WIPER AND WASHER SW → **TERMINAL 16** → TO GROUND AND CAUSES TO THE WASHER MOTOR TO RUN, AND WINDOW WASHER IS JET. THIS CAUSES THE CURRENT TO FLOW WASHER CONTINUOUS OPERATION CIRCUIT (W/ INT SW) IN **TERMINAL 18** OF THE WIPER AND WASHER SW → **TERMNAL 7** → **TERMINAL 2** OF THE FRONT WIPER MOTOR → FRONT WIPER MOTOR → TO **GROUND** AND FUNCTION.

SERVICE HINTS

C17 FRONT WIPER AND WASHER SW (W/ WIPER RELAY)

16–GROUND: ALWAYS CONTINUITY
18–GROUND: APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION
7–GROUND : APPROX. **12** VOLTS WITH WIPER AND WASHER SW AT **LOW** POSITION
APPROX. **12** VOLTS EVERY APPROX. **1** TO **10** SECONDS INTERMITTENTLY WITH WIPER SW AT **INT** POSITION
4–GROUND : APPROX. **12** VOLTS WITH IGNITION SW ON UNLESS WIPER MOTOR AT **STOP** POSITION
13–GROUND: APPROX. **12** VOLTS WITH IGNITION SW ON AND AFTER WIPER SW OFF UNTIL WIPER MOTOR STOPS

F 9 FRONT WIPER MOTOR

3–4 : CLOSED UNLESS WIPER MOTOR AT **STOP** POSITION

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C17	28	**J 6**	29		
F 9	26 (5S–FE), 27 (4A–FE)	**W 1**	26 (5S–FE), 27 (4A–FE)		

⬭ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)

▭ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IE1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)

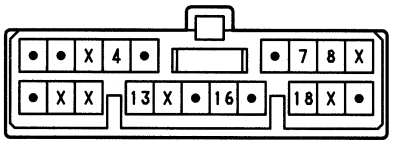
▽ : GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I2	36	COWL WIRE			

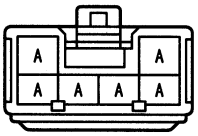
C17 BLACK



F 9 GRAY

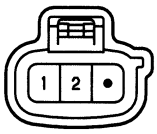


J 6



(HINT:SEE PAGE 7)

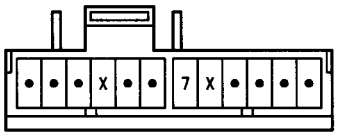
W 1 GRAY



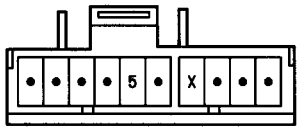
B 8, B 9



C14 (A)



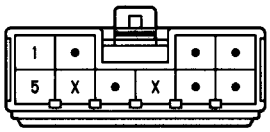
C15 (B) GRAY



D10



I12 BLACK

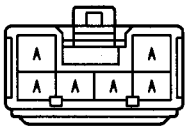


J 1



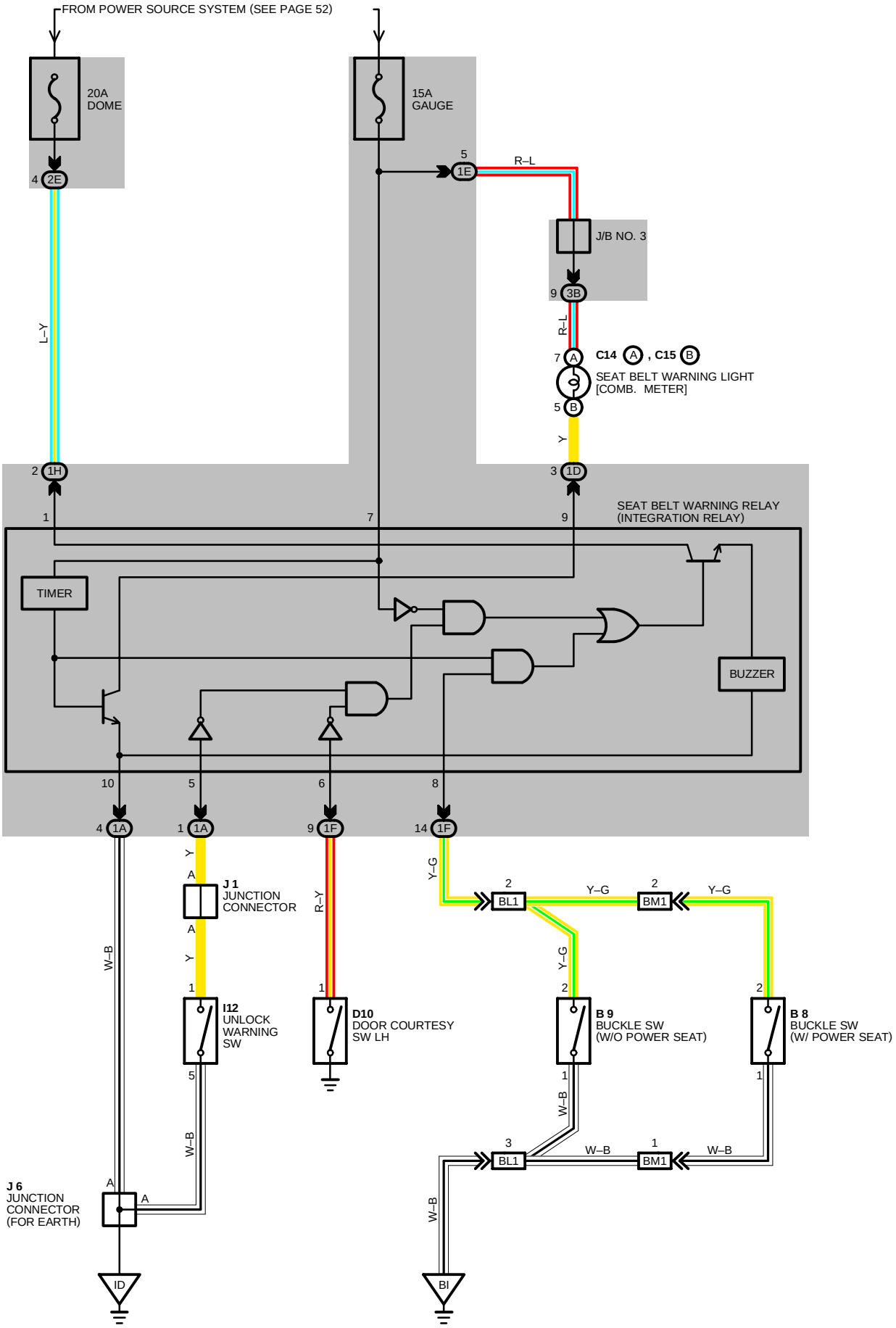
(HINT:SEE PAGE 7)

J 6



(HINT:SEE PAGE 7)

UNLOCK AND SEAT BELT WARNING



SYSTEM OUTLINE

CURRENT ALWAYS FLOWS TO **TERMINAL 1** OF THE SEAT BELT WARNING RELAY (INTEGRATION RELAY NO.1) THROUGH DOME FUSE.

1. SEAT BELT WARNING SYSTEM

WHEN THE IGNITION SW IS TURN ON, CURRENT FLOWS FROM THE GAUGE FUSE TO **TERMINAL 7** OF THE SEAT BELT WARNING RELAY. AT THE SAME TIME, CURRENT FLOWS TO **TERMINAL 9** OF THE RELAY FROM THE GAUGE FUSE THROUGH THE SEAT BELT WARNING LIGHT. THIS CURRENT ACTIVATES THE SEAT BELT WARNING RELAY AND, FOR APPROX. **4–8** SECONDS, CURRENT FLOWING THROUGH THE WARNING LIGHT FLOWS FROM **TERMINAL 9** OF THE RELAY → **TERMINAL 10** → **GROUND**, CAUSING THE WARNING LIGHT TO LIGHT UP. AT THE SAME AS THE WARNING LIGHT LIGHTS UP, A BUCKLE SW OFF SIGNAL IS INPUT TO **TERMINAL 8** OF THE RELAY, THE CURRENT FLOWING TO **TERMINAL 1** OF THE RELAY FLOWS FROM **TERMINAL 10** → **GROUND** AND THE SEAT BELT WARNING BUZZER SOUNDS FOR APPROX. **4–8** SECONDS. HOWEVER, IF THE SEAT BELT IS PUT ON (BUCKLE SW ON) DURING THIS PERIOD (WHILE THE BUZZER IS SOUNDING), SIGNAL INPUT TO **TERMINAL 8** OF RELAY STOPS AND THE CURRENT FLOW FROM **TERMINAL 1** OF THE RELAY → **TERMINAL 10** → **GROUND** IS CUT, CAUSING THE BUZZER TO STOP.

2. UNLOCK WARNING SYSTEM

WITH THE IGNITION KEY INSERTED IN THE KEY CYLINDER (UNLOCK SW ON). THE IGNITION SW STILL OFF AND DOOR OPEN (DOOR COURTESY SW ON), WHEN A SIGNAL IS INPUT TO **TERMINAL 6** OF THE RELAY, THE SEAT BELT WARNING RELAY OPERATES, CURRENT FLOWS FROM **TERMINAL 1** OF THE RELAY → **TERMINAL 10** → **GROUND** AND THE UNLOCK WARNING BUZZER SOUNDS.

SERVICE HINTS

I12 UNLOCK WARNING SW

1–5 : CLOSED WITH IGNITION KEY IN CYLINDER

SEAT BELT WARNING RELAY

10–GROUND : ALWAYS CONTINUITY
6–GROUND : CONTINUITY WITH DRIVER'S DOOR OPEN
5–GROUND : CONTINUITY WITH IGNITION KEY IN CYLINDER
8–GROUND : CONTINUITY WITH DRIVER'S LAP BELT IN USE
9–GROUND : **0** VOLTS FOR **4–8** SECONDS WITH IGNITION SW ON AND APPROX.**12** VOLTS **4–8** SECONDS AFTER IGNITION SW ON
1–GROUND : APPROX. **12** VOLTS WITH IGNITION SW ON

D10 DOOR COURTESY SW

1–GROUND : CLOSED WITH DRIVER'S DOOR OPEN

B 8, B 9, BUCKLE SW

2–1 : CLOSED WITH DRIVER'S LAP BELT IN USE

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
B 8	30 (L/B), 31 (C/P)	**C15** B	28	**J 1**	29
B 9	30 (L/B), 31 (C/P)	**D10**	30 (L/B), 31 (C/P)	**J 6**	29
C14 A	28	**I12**	29		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1D		
1E		
1F	18	FLOOR WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
3B	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

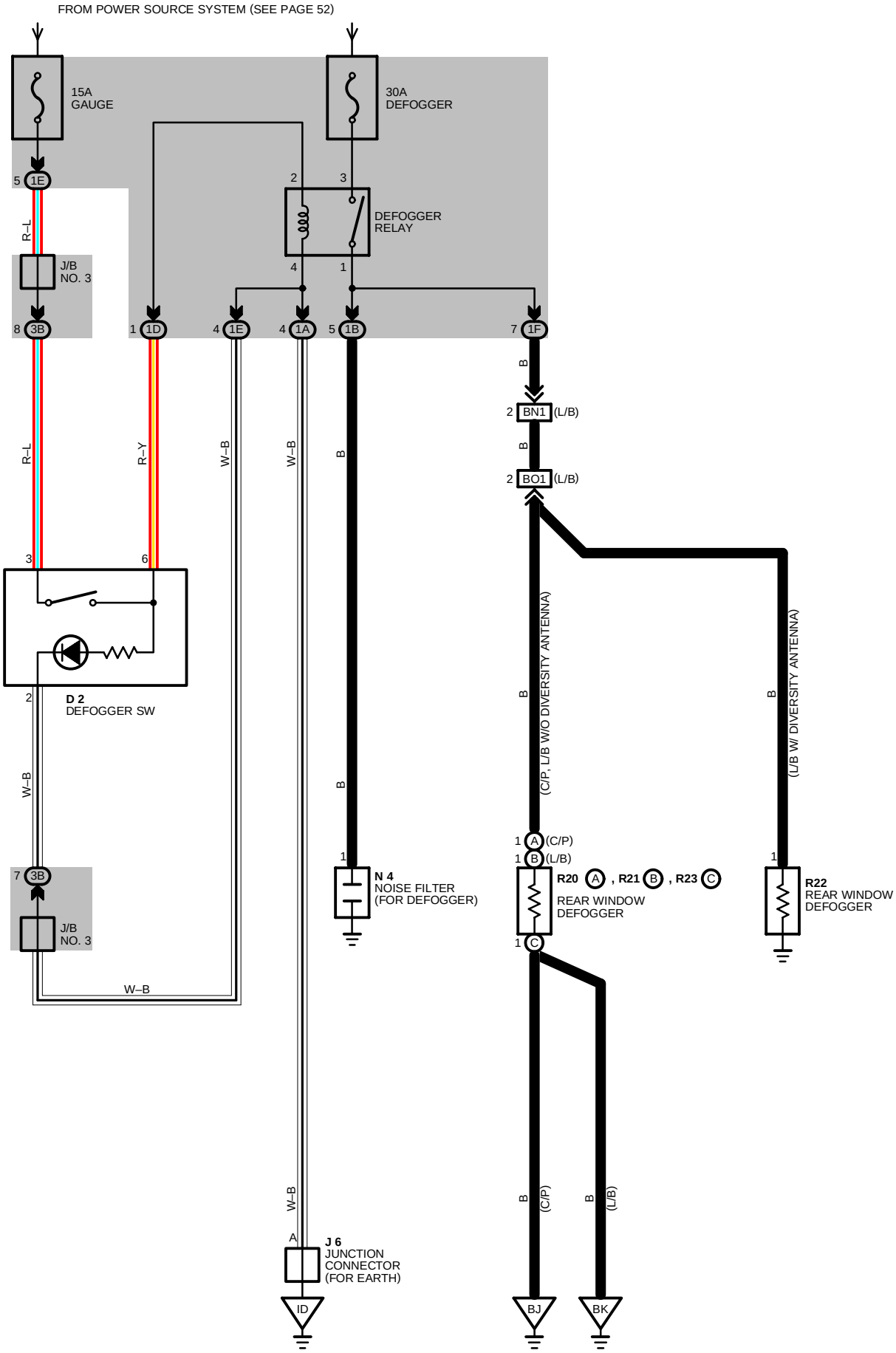
: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
BL1	38 (L/B)	FLOOR WIRE AND FRAME WIRE (LEFT SIDE OF FRONT FLOOR PANEL)
	40 (C/P)	
BM1	38 (L/B)	FRAME WIRE AND SEAT WIRE (UNDER THE DRIVER'S SEAT)
	40 (C/P)	

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL
BI	38 (L/B)	UNDER THE LEFT CENTER PILLAR

REAR WINDOW DEFOGGER



SERVICE HINTS

DEFOGGER RELAY

1–3 : CLOSED WITH IGNITION SW ON AND DEFOGGER SW ON

D 2 DEFOGGER SW

3–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION

2–GROUND : ALWAYS CONTINUITY

: PARTS LOCATION

CODE	SEE PAGE	CODE		SEE PAGE	CODE		SEE PAGE
D 2	28	**R20**	A	31 (C/P)	**R23**	C	30 (L/B), 31 (C/P)
J 6	29	**R21**	B	30 (L/B)			
N 4	29	**R22**		30 (L/B)			

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1B		
1D		
1E		
1F	18	FLOOR WIRE AND J/B NO. 1 (LEFT KICK PANEL)
3B	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
BN1	38 (L/B)	BACK DOOR NO. 1 WIRE AND FLOOR WIRE (LEFT SIDE OF PACKAGE TRAY TRIM)
BO1	38 (L/B)	BACK DOOR NO. 1 WIRE AND BACK DOOR NO. 1 SUB WIRE (BACK DOOR UPPER LEFT)

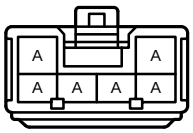
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL
BJ	40 (C/P)	RIGHT REAR PILLAR (C/P)
BK	38 (L/B)	BACK DOOR RIGHT (L/B)

D 2 BLACK



J 6



(HINT : SEE PAGE 7)

N 4



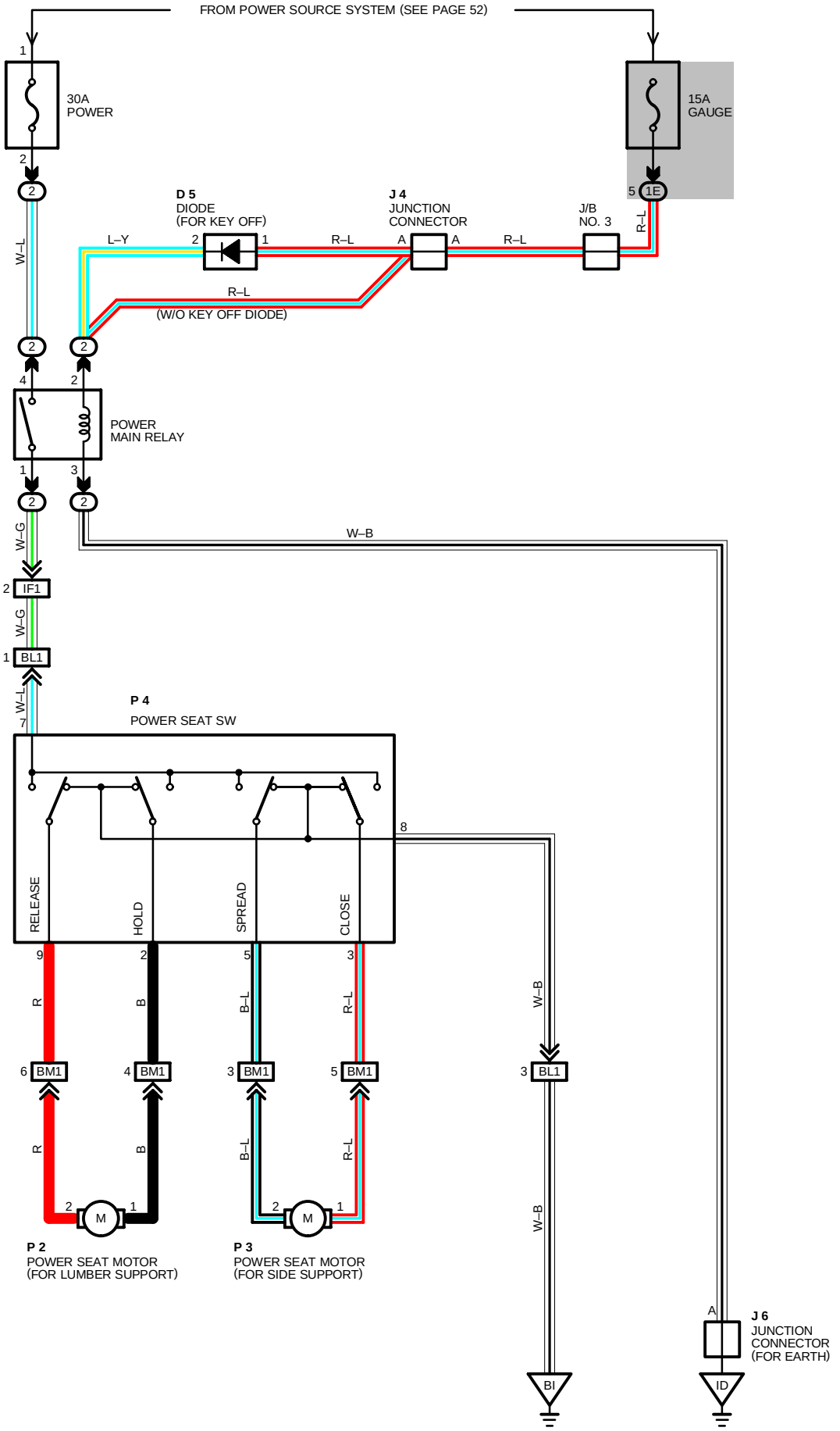
R20 (A) , **R21** (B) , **R23** (C) BLACK



R22



POWER SEAT


FROM POWER SOURCE SYSTEM (SEE PAGE 52)
30A
POWER
15A
GAUGE
D 5
DIODE
(FOR KEY OFF)
J 4
JUNCTION
CONNECTOR
J/B
NO. 3
L–Y
R–L
R–L
(W/O KEY OFF DIODE)
POWER
MAIN RELAY
W–L
W–G
W–B
IF1
BL1
P 4
POWER SEAT SW
RELEASE
HOLD
SPREAD
CLOSE
R
B
B–L
R–L
W–B
BM1
BL1
M
P 2
POWER SEAT MOTOR
(FOR LUMBER SUPPORT)
P 3
POWER SEAT MOTOR
(FOR SIDE SUPPORT)
J 6
JUNCTION
CONNECTOR
(FOR EARTH)
BI
ID

SERVICE HINTS

POWER MAIN RELAY

(2) 1–**(2)** 4 : CLOSED WITH IGNITION SW AT **ON** POSITION

P 4 POWER SEAT SW

7– GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION

8– GROUND : ALWAYS CONTINUITY

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
D 5	28	**J 6**	29	**P 3**	30 (L/B), 31 (C/P)
J 4	29	**P 2**	30 (L/B), 31 (C/P)	**P 4**	30 (L/B), 31 (C/P)

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	23	R/B NO. 2 (LEFT KICK PANEL)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1E	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IF1	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
BL1	38 (L/B) 40 (C/P)	FLOOR WIRE AND FRAME WIRE (LEFT SIDE OF FRONT FLOOR PANEL)
BM1	38 (L/B) 40 (C/P)	FRAME WIRE AND SEAT WIRE (UNDER THE DRIVER'S SEAT)

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL
BI	38 (L/B)	UNDER THE LEFT CENTER PILLAR

D 5 BLACK

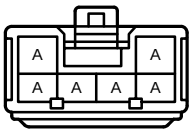


J 4



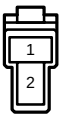
(HINT : SEE PAGE 7)

J 6

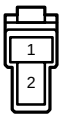


(HINT : SEE PAGE 7)

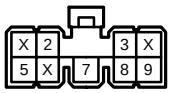
P 2



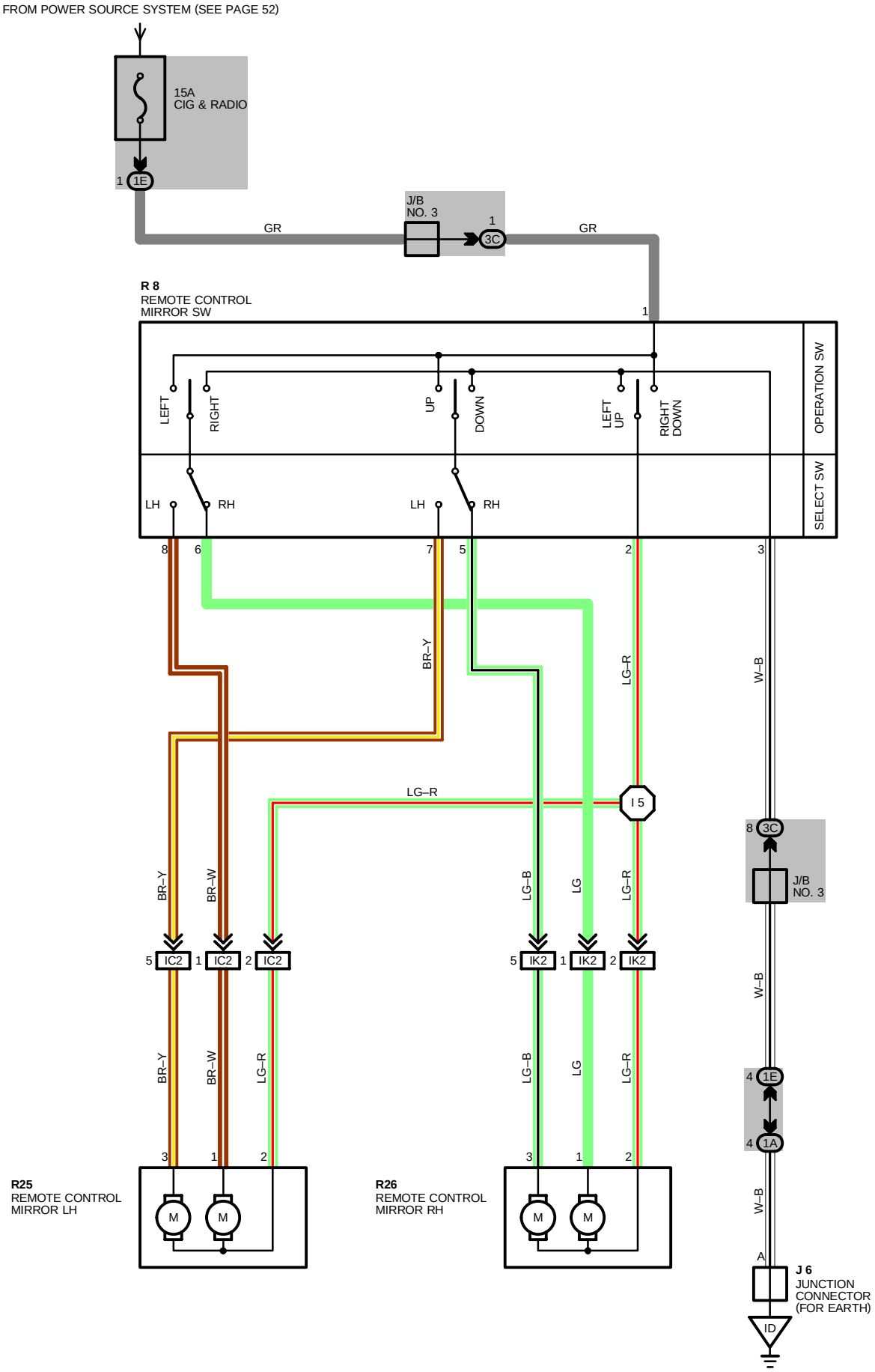
P 3 BLUE



P 4



REMOTE CONTROL MIRROR



SERVICE HINTS

R 8 REMOTE CONTROL MIRROR SW

1–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ACC** OR **ON** POSITION
2–3 : CONTINUITY WITH OPERATION SW AT **UP** OR **LEFT** POSITION
1–2 : CONTINUITY WITH OPERATION SW AT **DOWN** OR **RIGHT** POSITION

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
J 6	29	**R25**	30 (L/B), 31 (C/P)		
R 8	29	**R26**	30 (L/B), 31 (C/P)		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
3C	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC2	36	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
IK2	36	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)

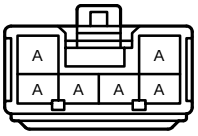
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL

: SPLICE POINTS

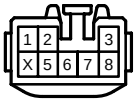
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 5	36	COWL WIRE			

J 6



(HINT : SEE PAGE 7)

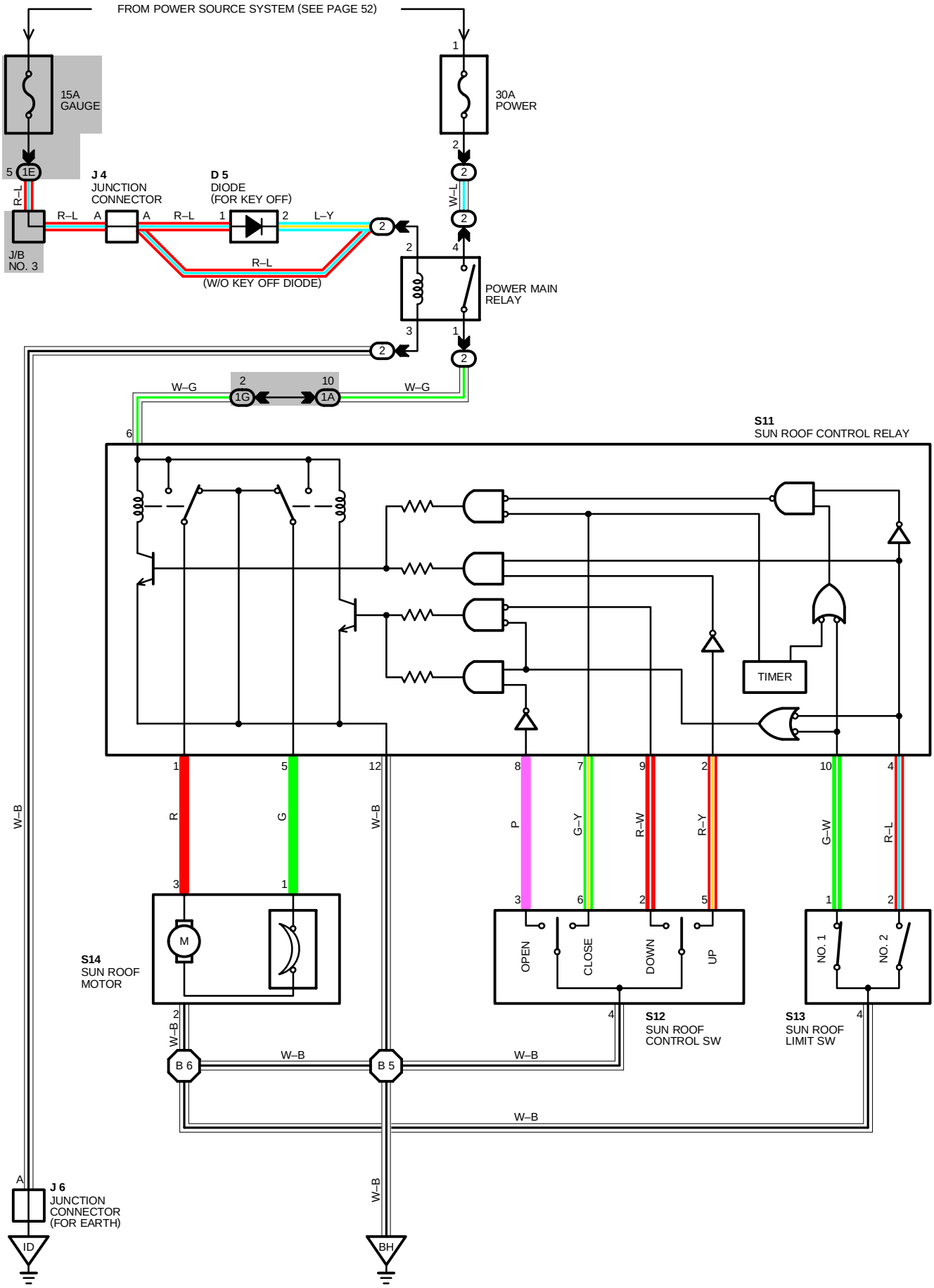
R 8



R25, R26



SUN ROOF


FROM POWER SOURCE SYSTEM (SEE PAGE 52)
15A
GAUGE
30A
POWER
J 4
JUNCTION
CONNECTOR
D 5
DIODE
(FOR KEY OFF)
J/B
NO. 3
R–L
L–Y
W–L
R–L
(W/O KEY OFF DIODE)
POWER MAIN
RELAY
W–G
W–G
S11
SUN ROOF CONTROL RELAY
TIMER
R
G
W–B
P
G–Y
R–W
R–Y
G–W
R–L
S14
SUN ROOF
MOTOR
M
OPEN
CLOSE
DOWN
UP
S12
SUN ROOF
CONTROL SW
NO. 1
NO. 2
S13
SUN ROOF
LIMIT SW
B 6
B 5
W–B
J 6
JUNCTION
CONNECTOR
(FOR EARTH)
ID
BH

SYSTEM OUTLINE

CURRENT ALWAYS FLOWS TO **TERMINAL 4** OF THE POWER MAIN RELAY THROUGH THE POWER FUSE, WITH THE IGNITION SW TURNED ON, CURRENT FLOWS THROUGH THE GAUGE FUSE TO **TERMINAL 2** OF THE POWER MAIN RELAY. THIS ACTIVATES THE RELAY AND CURRENT FLOWING TO **TERMINAL 4** OF THE POWER MAIN RELAY FLOWS TO **TERMINAL 1** OF THE POWER MAIN RELAY → TO **TERMINAL 6** OF THE SUN ROOF CONTROL RELAY.

1. SLIDE OPEN OPERATION

WHEN THE IGNITION SW IS ON AND THE SUN ROOF SW IS PUSHED TO THE OPEN SIDE, A SIGNAL IS INPUT TO **TERMINAL 8** OF THE SUN ROOF CONTROL RELAY. WHEN THIS OCCURS ACTIVATING THE RELAY SO THAT CURRENT FLOWS FROM **TERMINAL 6** OF THE RELAY → **TERMINAL 5** → **TERMINAL 1** OF THE SUN ROOF MOTOR → MOTOR → **TERMINAL 3** → **TERMINAL 1** OF THE RELAY → **TERMINAL 12** → **GROUND,** THE MOTOR ROTATES TO THE OPEN SIDE AND THE SUN ROOF SLIDES OPEN AS LONG AS THE SUN ROOF CONTROL SW IS PUSHED TO THE OPEN SIDE.

WHEN THE SUN ROOF IS OPENED COMPLETELY, EVEN IF THE SUN ROOF SW IS PUSHED CONTINUOUSLY, THE CURRENT TO THE SUN ROOF MOTOR INCREASES.

IN THIS CASE, THE CIRCUIT BREAKER BUILT INTO THE MOTOR OPENS AND CUTS OUT THE CURRENT TO THE MOTOR, PREVENTING THE MOTOR FROM BURNING OUT.

2. SLIDE CLOSE OPERATION

WHEN THE IGNITION SW IS ON AND THE SUN ROOF CONTROL SW IS PUSHED TO THE CLOSE SIDE, A SIGNAL IS INPUT TO **TERMINAL 7** OF THE SUN ROOF CONTROL RELAY. THIS ACTIVATES THE RELAY AND THE CURRENT FLOWING TO **TERMINAL 6** FLOWS TO **TERMINAL 1** → **TERMINAL 3** OF THE SUN ROOF MOTOR → MOTOR → **TERMINAL 1** → **TERMINAL 5** OF THE RELAY → **TERMINAL 12** → **GROUND**. THIS CAUSES THE MOTOR TO ROTATE TO THE CLOSE SIDE AND SLIDE CLOSE OPERATION CONTINUES AS LONG AS THE SUN ROOF CONTROL SW IS PUSHED TO THE CLOSE SIDE.

100 MM BEFORE THE FULLY **CLOSED** POSITION THE SUN ROOF LIMIT NO. 1 SW TURN OFF. THIS SIGNAL IS INPUT INTO THE RELAY, SO THE RELAY STOPS OPERATION. THUS CURRENT DOES NOT FLOW TO THE SUN ROOF MOTOR AND THE SUN ROOF AUTOMATICALLY STOPS.

IF THE SUN ROOF SW IS THEN PUSH AGAIN, THE TIMER INSTALLED IN THE SUN ROOF CONTROL TURNS ON AND THE RELAY OPERATES FOR **0.65** SEC. TO RE–OPERATE THE MOTOR SO THAT THE SUN ROOF LIMIT SW NO. 1 TURNS ON (SUN ROOF LIMIT SW NO. 2 TURNS OFF). AS A RESULT, AS LONG AS THE SUN ROOF SW IS PUSHED, SLIDE CLOSE OPERATION OCCURS AND THE SUN ROOF IS ABLE TO FULLY CLOSE.

3. TILT UP OPERATION

WHEN THE SUN ROOF CONTROL SW IS PUSHED TO THE **TILT UP** POSITION, WITH THE IGNITION SW TURNED ON AND THE SLIDE ROOF COMPLETELY CLOSED A SIGNAL IS INPUT TO **TERMINAL 2** OF THE SUN ROOF CONTROL RELAY AND SUN ROOF LIMIT SW NO. 2 IS TURNED OFF (SUN ROOF LIMIT SW NO. 1 TURNS ON) SIMULTANEOUSLY, CAUSING THE SUN ROOF CONTROL RELAY TO OPERATE. AS A RESULT, THE RELAY IS ACTIVATED AND CURRENT FLOWS FROM **TERMINAL 6** OF THE RELAY → **TERMINAL 1** → **TERMINAL 3** OF THE SUN ROOF MOTOR → MOTOR → **TERMINAL 1** → **TERMINAL 5** OF THE RELAY → **TERMINAL 12** → **GROUND**, ROTATING THE MOTOR FOR TILT UP OPERATION.

4. TILT DOWN OPERATION

WHEN THE SUN ROOF CONTROL SW IS PUSHED TO THE **TILT DOWN** POSITION, WITH THE IGNITION SW TURNED ON AND THE SLIDE ROOF TILTED UP, A SIGNAL IS INPUT TO **TERMINAL 9** OF THE SUN ROOF CONTROL RELAY SIGNALS THAT SUN ROOF LIMIT SW NO. 1 AND NO. 2 ARE OFF ARE INPUT SEPARATELY TO **TERMINAL 10** AND **TERMINAL 4**.

AS A RESULT, RELAY ACTIVATES AND THE CURRENT FLOWS FROM **TERMINAL 6** OF THE RELAY → **TERMINAL 5** → **TERMINAL 1** OF THE SUN ROOF MOTOR → MOTOR → **TERMINAL 3** → **TERMINAL 1** OF THE RELAY → **TERMINAL 12** → **GROUND,** ROTATING THE MOTOR FOR TILT DOWN OPERATION.

SERVICE HINTS

S11 SUN ROOF CONTROL RELAY

12–GROUND : ALWAYS CONTINUITY
6–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION
1–GROUND : APPROX. **12** VOLTS WITH IGNITION SW ON AND SUN ROOF SW **CLOSED** OR **UP** POSITION
5–GROUND : APPROX. **12** VOLTS WITH IGNITION SW ON AND SUN ROOF SW **OPEN** OR **DOWN** POSITION

(DISCONNECT WIRING CONNECTOR FROM ECU)
8–GROUND : CONTINUITY WITH SUN ROOF SW AT **OPEN** POSITION
7–GROUND : CONTINUITY WITH SUN ROOF SW AT **CLOSE** POSITION
9–GROUND : CONTINUITY WITH SUN ROOF SW AT **DOWN** POSITION
2–GROUND : CONTINUITY WITH SUN ROOF SW AT **UP** POSITION

SUN ROOF

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
D 5	28	**S11**	30 (L/B), 31 (C/P)	**S14**	30 (L/B), 31 (C/P)
J 4	29	**S12**	30 (L/B), 31 (C/P)		
J 6	29	**S13**	30 (L/B), 31 (C/P)		

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	23	R/B NO. 2 (LEFT KICK PANEL)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
1G	18	ROOF WIRE AND J/B NO. 1 (LEFT KICK PANEL)

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL
BH	38 (L/B)	ROOF LEFT

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
B 5	38 (L/B)	ROOF WIRE	**B 6**	38 (L/B)	ROOF WIRE
	40 (C/P)			40 (C/P)	

D 5 BLACK

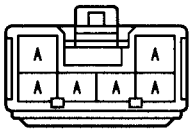


J 4



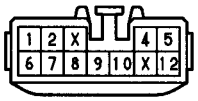
(HINT:SEE PAGE 7)

J 6



(HINT:SEE PAGE 7)

S11



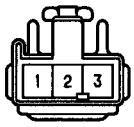
S12



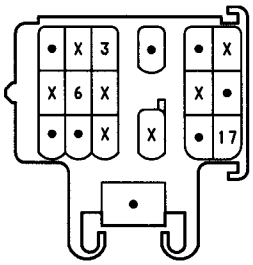
S13



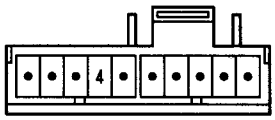
S14



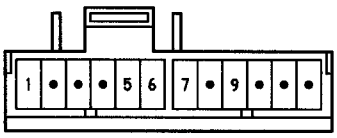
C 1 DARK GRAY



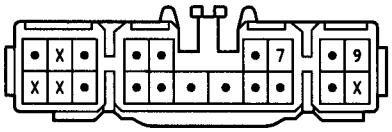
C13 (B) BROWN



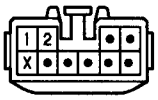
C14 (A)



C19 (B)



C20 (A)



E 1 BLACK



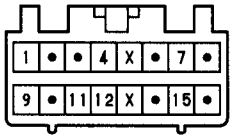
E 2 GREEN



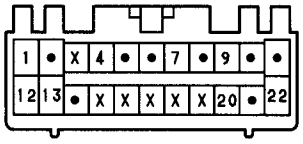
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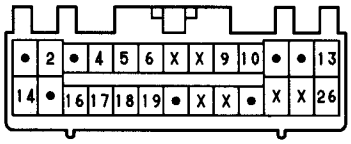
E 6 (C) DARK GRAY



E 7 (A) DARK GRAY



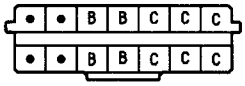
E 8 (B) DARK GRAY



I 3 GRAY

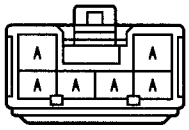


J 2



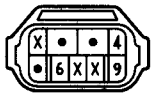
(HINT:SEE PAGE 7)

J 6



(HINT:SEE PAGE 7)

N 2 GRAY



O 7



S 2 GRAY



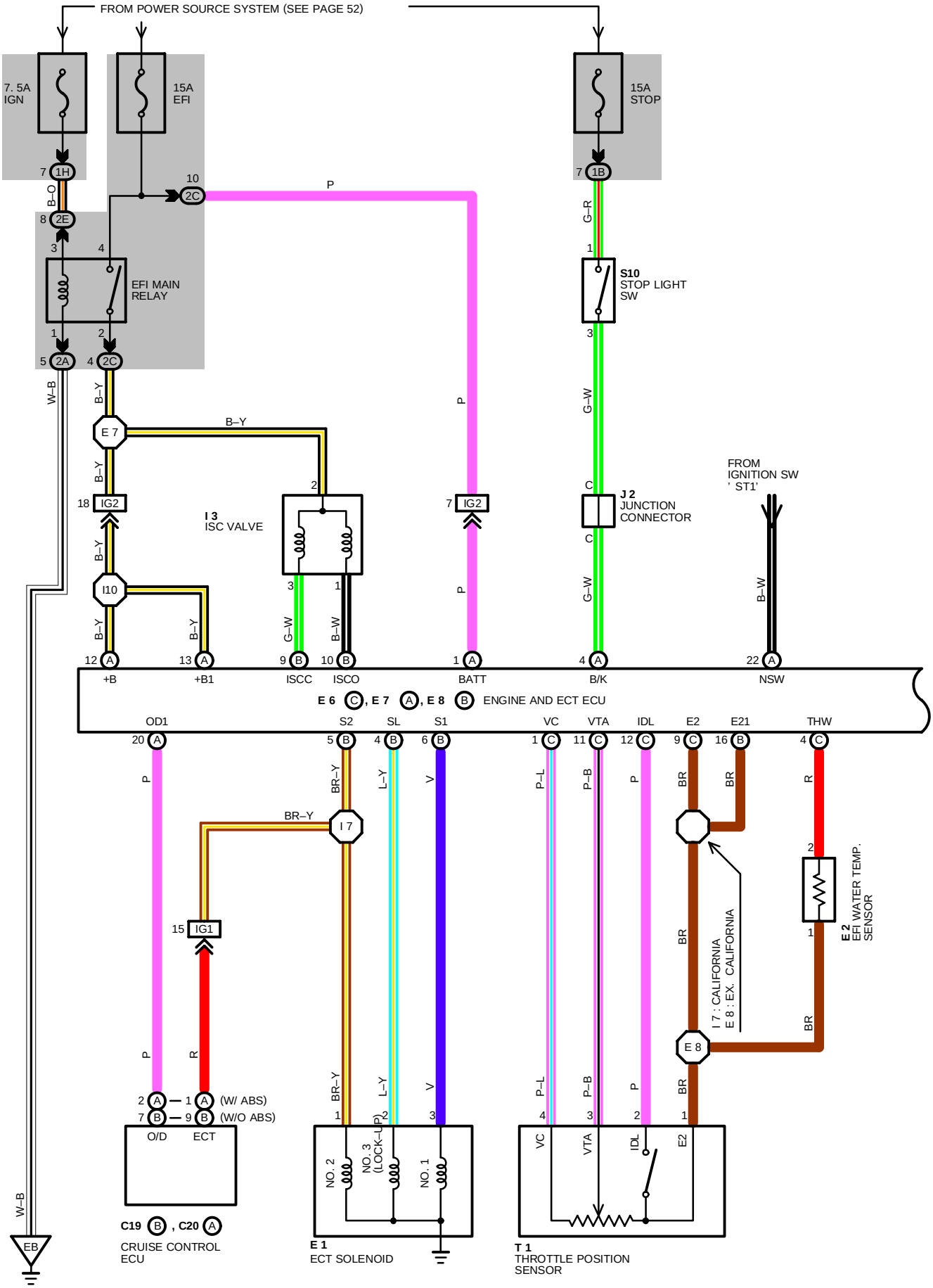
S10

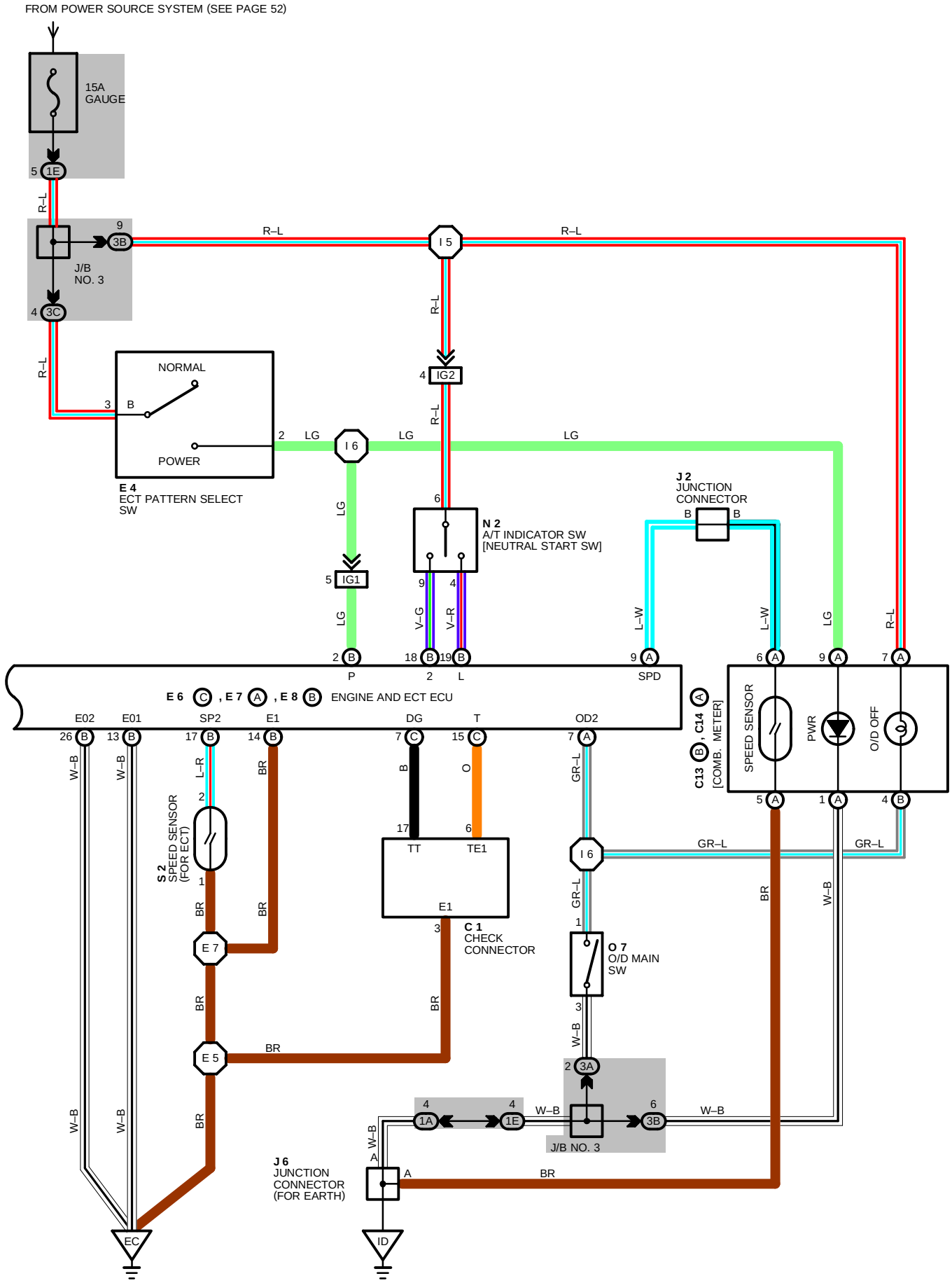


T 1 BLACK



ECT (ELECTRONIC CONTROLLED TRANSMISSION)




FROM POWER SOURCE SYSTEM (SEE PAGE 52)
15A
GAUGE
5 1E
R–L
9
3B
J/B
NO. 3
4 3C
R–L
NORMAL
3 B
POWER
2
E 4
ECT PATTERN SELECT
SW
R–L
I 5
R–L
4 IG2
R–L
LG
I 6
LG
LG
LG
5 IG1
LG
6
N 2
A/T INDICATOR SW
[NEUTRAL START SW]
9
4
V–G
V–R
2 B
18 B
19 B
P
2
L
J 2
JUNCTION
CONNECTOR
B
B
L–W
L–W
LG
R–L
9 A
SPD
6 A
9 A
7 A
E6 C , E7 A , E8 B ENGINE AND ECT ECU
C13 B , C14 A
[COMB. METER]
SPEED SENSOR
PWR
O/D OFF
5 A
1 A
4 B
E02
E01
SP2
E1
DG
T
OD2
26 B
13 B
17 B
14 B
7 C
15 C
7 A
W–B
W–B
L–R
BR
B
O
GR–L
S 2
SPEED SENSOR
(FOR ECT)
2
1
BR
BR
17
6
TT
TE1
E1
GR–L
GR–L
I 6
BR
W–B
E 7
3
C 1
CHECK
CONNECTOR
GR–L
1
O 7
O/D MAIN
SW
BR
BR
BR
3
W–B
E 5
BR
2 3A
4
4
W–B
6
W–B
1A
1E
3B
J/B NO. 3
W–B
A
J 6
JUNCTION
CONNECTOR
(FOR EARTH)
A
BR
W–B
W–B
BR
EC
ID

ECT (ELECTRONIC CONTROLLED TRANSMISSION)

SYSTEM OUTLINE

PREVIOUS AUTOMATIC TRANSMISSIONS HAVE SELECTED EACH GEAR SHIFT USING MECHANICALLY CONTROLLED THROTTLE HYDRAULIC PRESSURE, GOVERNOR HYDRAULIC PRESSURE AND LOCK–UP HYDRAULIC PRESSURE. THE ECT, HOWEVER, ELECTRICALLY CONTROLS THE LINE PRESSURE AND LOCK–UP PRESSURE ETC., THROUGH THE SOLENOID VALVE. ECT ECU CONTROL OF THE SOLENOID VALVE BASED ON THE INPUT SIGNALS FROM EACH SENSOR MAKES SMOOTH DRIVING POSSIBLE BY SHIFT SELECTION FOR EACH GEAR WHICH IS MOST APPROPRIATE TO THE DRIVING CONDITIONS AT THAT TIME.

1. GEAR SHIFT OPERATION

DURING DRIVING, THE ECU SELECTS THE SHIFT FOR EACH GEAR WHICH IS MOST APPROPRIATE TO THE DRIVING CONDITIONS, BASED ON INPUT SIGNALS FROM THE EFI WATER TEMP. SENSOR TO **TERMINAL THW** OF THE ECU, AND ALSO THE INPUT SIGNALS TO **TERMINAL SP2** OF THE ECU FROM THE SPEED SENSOR DEVOTED TO THE ECT. CURRENT IS THEN OUTPUT TO THE ECT SOLENOIDS. WHEN SHIFTING TO 1ST SPEED, CURRENT FLOWS FROM **TERMINAL S1** OF THE ECU → **TERMINAL 3** OF THE ECT SOLENOIDS → **GROUND**, AND CONTINUITY TO THE NO. 1 SOLENOID CAUSES THE SHIFT.

FOR 2ND SPEED, CURRENT FLOWS FROM **TERMINAL S1** OF THE ECU → **TERMINAL 3** OF THE ECT SOLENOIDS → **GROUND**, AND FROM **TERMINAL S2** OF THE ECU → **TERMINAL 1** OF THE ECT SOLENOIDS → **GROUND**, AND CONTINUITY TO SOLENOIDS NO. 1 AND NO. 2 CAUSES THE SHIFT.

FOR 3RD SPEED, THERE IS NO CONTINUITY TO NO. 1 SOLENOID, ONLY TO NO. 2, CAUSING THE SHIFT.

SHIFTING INTO 4TH SPEED (OVER DRIVE) TAKES PLACE WHEN THERE IS NO CONTINUITY TO EITHER NO. 1 OR NO. 2 SOLENOID.

2. LOCK–UP OPERATION

WHEN THE ECT ECU JUDGES FROM EACH SIGNAL THAT LOCK–UP OPERATION CONDITIONS HAVE BEEN MET, CURRENT FLOWS FROM **TERMINAL SL** OF THE ECT ECU → **TERMINAL 2** OF THE ECT SOLENOID → **GROUND**, CAUSING CONTINUITY TO THE LOCK–UP SOLENOID AND CAUSING LOCK–UP OPERATION.

3. STOP LIGHT SW CIRCUIT

IF THE BRAKE PEDAL IS DEPRESSED (STOP LIGHT SW ON) WHEN DRIVING IN LOCK–UP CONDITION, A SIGNAL IS INPUT TO **TERMINAL B/K** OF THE ECU, THE ECU OPERATES AND CONTINUITY TO THE LOCK–UP SOLENOID IS CUT.

4. OVERDRIVE CIRCUIT

***** O/D MAIN SW ON

WHEN THE O/D MAIN SW IS TURNED ON (O/D OFF INDICATOR LIGHT TURNS OFF), A SIGNAL IS INPUT TO **TERMINAL OD2** OF THE ECU AND ECU OPERATION CAUSES GEAR SHIFT WHEN THE CONDITIONS FOR OVERDRIVE ARE MET.

***** O/D MAIN SW OFF

WHEN THE OVERDRIVE SW IS TURNED TO OFF, THE CURRENT FLOWING THROUGH THE O/D OFF INDICATOR LIGHT FLOWS THROUGH THE O/D MAIN SW TO **GROUND**. CAUSING THE INDICATOR LIGHT TO LIGHT UP. AT THE SAME TIME, A SIGNAL IS INPUT TO **TERMINAL OD2** OF THE ECU AND ECU OPERATION PREVENTS SHIFT INTO OVERDRIVE.

5. ECT PATTERN SELECT SW CIRCUIT

IF THE ECT PATTERN SELECT SW IS CHANGED FROM NORMAL TO POWER, THE CURRENT FLOWING THROUGH THE POWER INDICATOR FLOWS TO **GROUND**, CURRENT FLOWS TO **TERMINAL P** OF THE ECT ECU, THE ECU OPERATES, AND SHIFT UP AND SHIFT DOWN OCCUR AT HIGHER VEHICLE SPEEDS THAN WHEN THE SW IS IN **NORMAL** POSITION.

SERVICE HINTS

E 6(C), E 7(A), E 8(B) ENGINE AND ECT ECU

(B) 6–**(B)**14 **: 10–14** VOLTS (IGNITION SW ON)
(B)4, **(B)**5–**(B)**14 : UNDER 1 VOLTS (IGNITION SW ON)
(B)2–**(B)**14 : **10–14** VOLTS (IGNITION SW AND ECT PATTERN SELECT SW POWER)
UNDER **1** VOLTS (IGNITION SW ON AND ECT PATTERN SELECT SW NORMAL)
(A) 4–**(B)**14 : **10–14** VOLTS (BRAKE PEDAL IS DEPRESSED)
UNDER **1** VOLTS (BRAKE PEDAL IS DEPRESSED)
(C) 4–**(B)**14 : **0.1–0.8** VOLTS (IGNITION SW ON AND COOLANT TEMP. **80**°C (**176**°F))
(C)12–**(C)** 9 : UNDER **1** VOLTS (IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED)
4.5–5.5 VOLTS (IGNITION SW ON AND THROTTLE VALVE CLOSED)
(C)11–**(C)** 9 : **0.1–0.8** VOLTS (IGNITION SW ON AND THROTTLE VALVE FULLY CLOSED)
4.5–5.5 VOLTS (IGNITION SW ON AND THROTTLE VALVE FULLY OPEN)
(C) 1–**(C)** 9 : **4.5–5.5** VOLTS (IGNITION SW ON)
(A)20–**(B)**14 : **10–14** VOLTS (IGNITION SW ON)
(A) 7–**(B)**14 : **10–14** VOLTS (IGNITION SW ON AND O/D MAIN SW TURNED ON)
UNDER **1** VOLTS (IGNITION SW ON AND O/D MAIN SW TURNED OFF)
(A) 9–**(B)**14 : UNDER **1** VOLTS (IGNITION SW ON, CRUISE CONTROL SW OFF AND STARTING STILL)
0 ↔ **10–14** VOLTS REPEAT (IGNITION SW ON, CRUISE CONTROL SW OFF AND VEHICLE MOVING)

(B)17–**(B)**14 : UNDER **1** VOLTS (IGNITION SW ON AND STARTING STILL)
0 ↔ **4.5–5.5** VOLTS REPEAT (IGNITION SW ON AND VEHICLE MOVING)
(B)22–**(B)**14 : **10–14** VOLTS (IGNITION SW ON AND NEUTRAL START SW **P** OR **N** POSITION)
UNDER **1** VOLTS (IGNITION SW ON AND EX. NEUTRAL START SW **P** OR **N** POSITION
(B)18–**(B)**14 : **10–14** VOLTS (IGNITION SW ON AND NEUTRAL START SW **2** POSITION)
UNDER **1** VOLTS (IGNITION SW ON AND EX. NEUTRAL START SW **2** POSITION)
(B)19–**(B)**14 : **10–14** VOLTS (IGNITION SW ON AND NEUTRAL START SW **L** POSITION)
UNDER **1** VOLTS (IGNITION SW ON AND EX. NEUTRAL START SW **L** POSITION)
(A)12, **(B)**13–**(B)**14 : **10–14** VOLTS (IGNITION SW ON)
(A) 1–**(B)**14 : **10–14** VOLTS (ALL CONDITIONS)

RESISTANCE AT ECU WIRING CONNECTORS
(DISCONNECT WIRING CONNECTOR)
(C)12–**(C)** 9 : INFINITY (THROTTLE VALVE OPEN)
2.3 KΩ OR LESS (THROTTLE VALVE FULLY CLOSED)
(C)11–**(C)** 9 : **3.3–10.0** KΩ (THROTTLE VALVE FULLY OPEN)
0.2–0.8 KΩ (THROTTLE VALVE FULLY CLOSED)
(C) 1–**(C)** 9 : **3.0–7.0** KΩ
(C) 4–**(C)** 9 : **0.2–0.4** KΩ (COOLANT TEMP. **80**°C, **176**°F)
(B) 4, **(B)** 5, **(B)** 6–GROUND **: 11–15** Ω (ALL CONDITIONS)

: PARTS LOCATION

CODE		SEE PAGE	CODE		SEE PAGE	CODE	SEE PAGE
C 1		26 (5S–FE)	**E 4**		29	**N 2**	26 (5S–FE)
C13	B	28	**E 6**	C	29	**O 7**	29
C14	A	28	**E 7**	A	29	**S 2**	26 (5S–FE)
C19	B	28	**E 8**	B	29	**S10**	29
C20	A	28	**I 3**		26 (5S–FE)	**T 1**	26 (5S–FE)
E 1		26 (5S–FE)	**J 2**		29		
E 2		26 (5S–FE)	**J 6**		29		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1B		
1E		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2A	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2C	20	ENGINE WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
3A	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)
3B		
3C		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

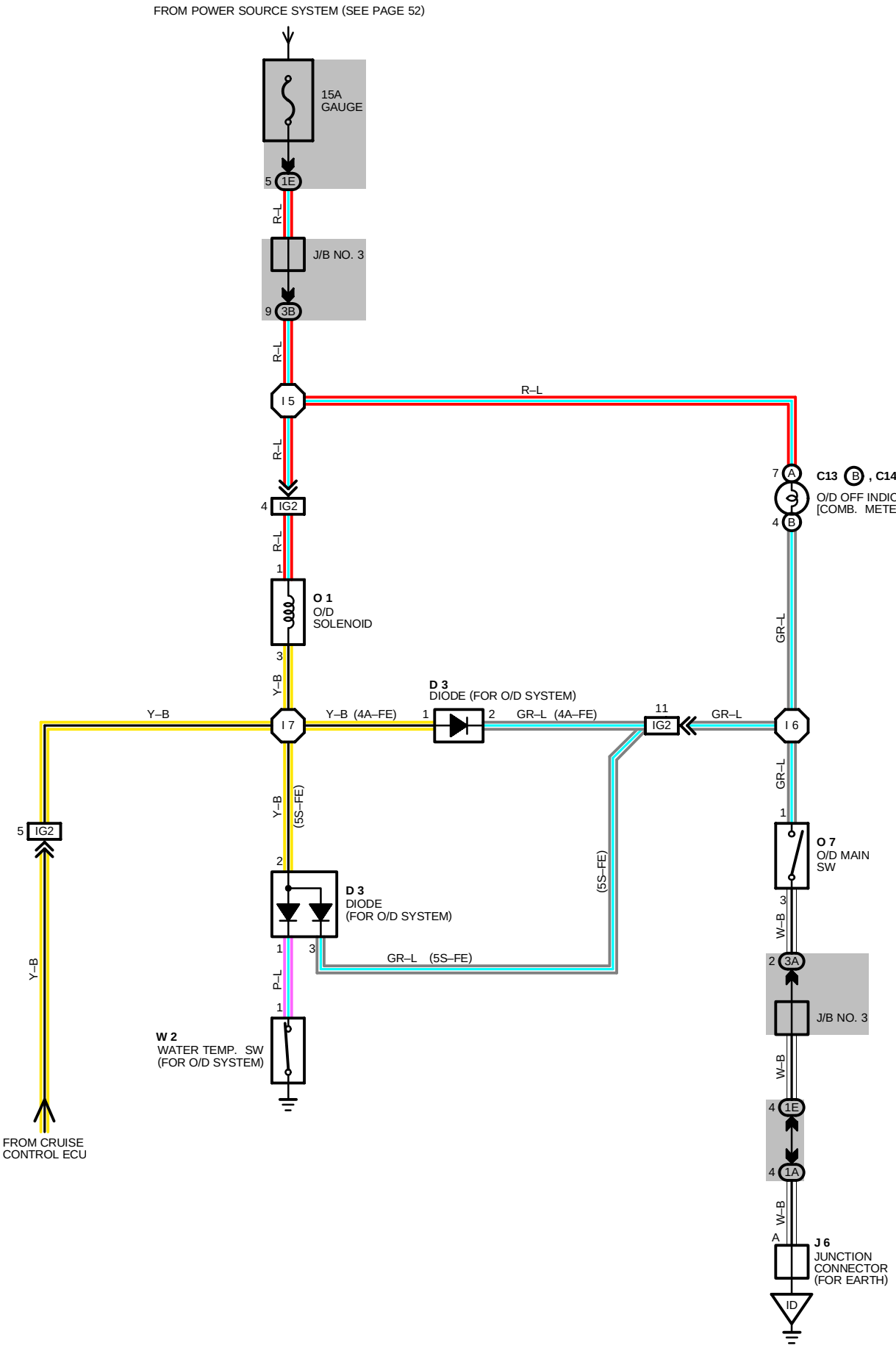
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IG1	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)
IG2		

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EB	32 (5S–FE)	FRONT LEFT FENDER
EC	32 (5S–FE)	INTAKE MANIFOLD
ID	36	LEFT KICK PANEL

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 5	32 (5S–FE)	ENGINE WIRE	**I 6**	36	COWL WIRE
E 7			**I 7**	36	ENGINE WIRE
E 8			**I10**	36	CONSOLE BOX WIRE
I 5	36	COWL WIRE			


FROM POWER SOURCE SYSTEM (SEE PAGE 52)
15A
GAUGE
5 1E
R–L
J/B NO. 3
9 3B
R–L
I 5
R–L
4 IG2
R–L
1
O 1
O/D
SOLENOID
3
Y–B
D 3
DIODE (FOR O/D SYSTEM)
Y–B
I 7
Y–B (4A–FE)
1
2
GR–L (4A–FE)
11
IG2
GR–L
I 6
7 A
C13 B , C14 A
O/D OFF INDICATOR
[COMB. METER]
4 B
GR–L
GR–L
1
O 7
O/D MAIN
SW
3
W–B
2 3A
J/B NO. 3
W–B
4 1E
4 1A
W–B
A
J 6
JUNCTION
CONNECTOR
(FOR EARTH)
ID
5 IG2
Y–B
FROM CRUISE
CONTROL ECU
Y–B
(5S–FE)
2
D 3
DIODE
(FOR O/D SYSTEM)
1
3
GR–L (5S–FE)
(5S–FE)
P–L
1
W 2
WATER TEMP. SW
(FOR O/D SYSTEM)

SERVICE HINTS

O 7 O/D MAIN SW
1–3 : CLOSED WITH O/D MAIN SW OFF, OPEN WITH O/D MAIN SW ON

: PARTS LOCATION

CODE		SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C13	B	28	**J 6**	29	**W 2**	26 (5S–FE)
C14	A	28	**O 1**	26 (5S–FE), 27 (4A–FE)		
D 3		28	**O 7**	29		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
3A	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)
3B		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IG2	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)

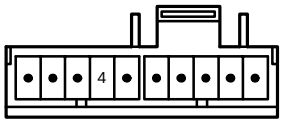
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL

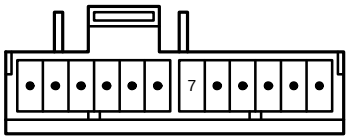
: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 5	36	COWL WIRE	**I 7**	36	ENGINE WIRE
I 6					

C13 (B) BROWN



C14 (A)



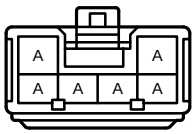
(5S–FE) **D 3** BLACK



(4A–FE) **D 3** BLACK



J 6

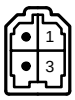


(HINT : SEE PAGE 7)

O 1 BLACK



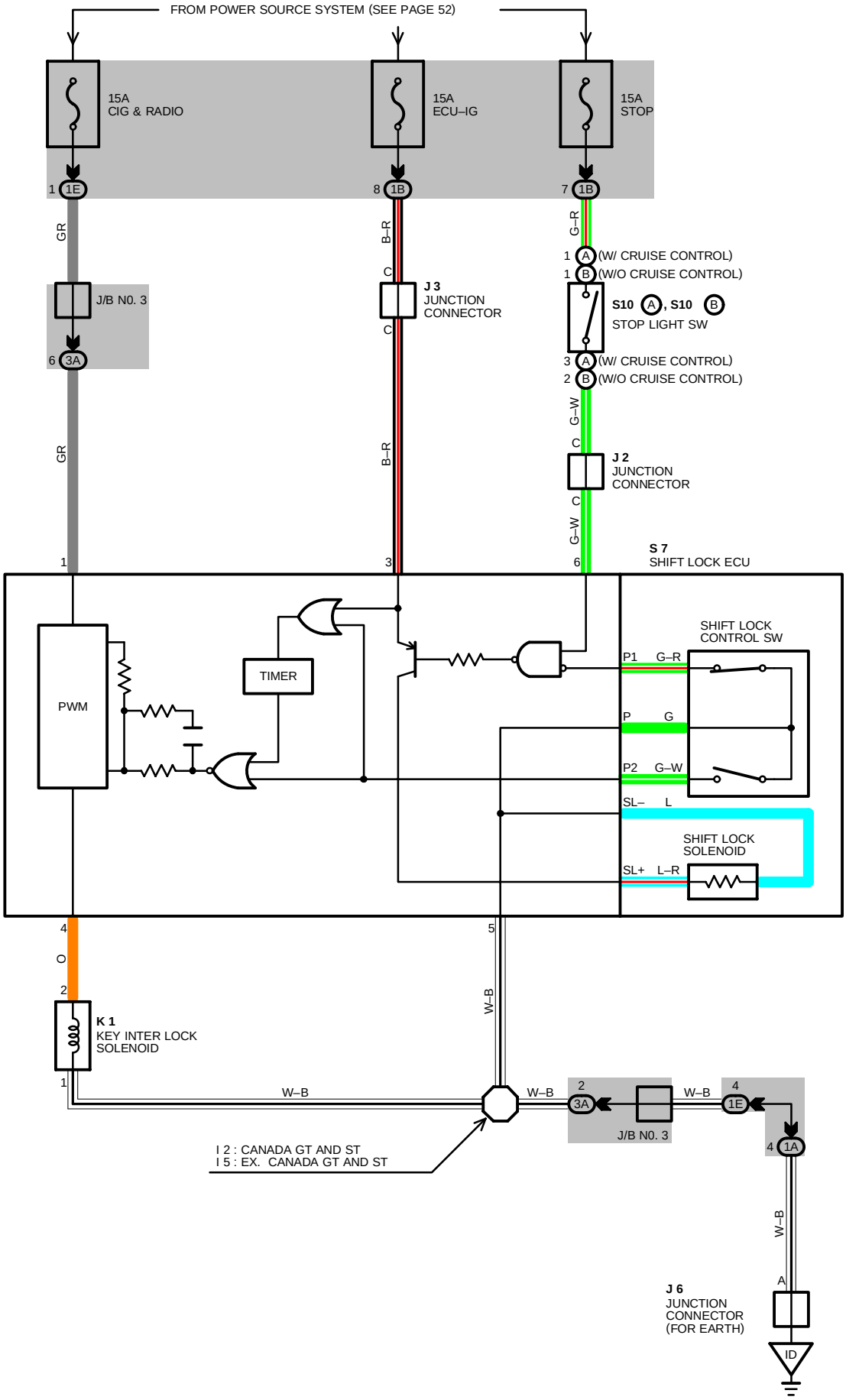
O 7



W 2 BROWN



SHIFT LOCK


FROM POWER SOURCE SYSTEM (SEE PAGE 52)
15A
CIG & RADIO
15A
ECU–IG
15A
STOP
1 1E
8 1B
7 1B
GR
B–R
G–R
1 A (W/ CRUISE CONTROL)
1 B (W/O CRUISE CONTROL)
J/B N0. 3
6 3A
J 3
JUNCTION
CONNECTOR
S10 A, S10 B
STOP LIGHT SW
3 A (W/ CRUISE CONTROL)
2 B (W/O CRUISE CONTROL)
G–W
J 2
JUNCTION
CONNECTOR
S 7
SHIFT LOCK ECU
SHIFT LOCK
CONTROL SW
P1 G–R
P G
P2 G–W
SL– L
SHIFT LOCK
SOLENOID
SL+ L–R
PWM
TIMER
O
K 1
KEY INTER LOCK
SOLENOID
W–B
I 2 : CANADA GT AND ST
I 5 : EX. CANADA GT AND ST
2 3A
4 1E
4 1A
J/B N0. 3
J 6
JUNCTION
CONNECTOR
(FOR EARTH)
A
ID

SYSTEM OUTLINE

WHEN THE IGNITION SW IS TURNED TO **ACC** POSITION THE CURRENT FROM THE CIG FUSE FLOWS TO **TERMINAL 1** OF THE SHIFT LOCK ECU. IN THE **ON** POSITION, THE CURRENT FROM THE ECU–IG FUSE FLOWS TO **TERMINAL 3** OF THE ECU.

1. SHIFT LOCK MECHANISM

WITH THE IGNITION SW ON, WHEN A SIGNAL THAT THE BRAKE PEDAL IS DEPRESSED (STOP LIGHT SW ON) AND A SIGNAL THAT THE SHIFT LEVER IS PUT IN "P" RANGE (CONTINUITY BETWEEN P1 AND P OF THE SHIFT POSITION SW) IS INPUT TO THE ECU. THE ECU OPERATES AND CURRENT FLOWS FROM **TERMINAL 3** OF THE ECU → **TERMINAL SL+** OF THE SHIFT LOCK SOLENOID → SOLENOID → **TERMINAL SL–** → **TERMINAL 5** OF THE ECU → **GROUND**. THIS CAUSES THE SHIFT LOCK SOLENOID TO TURN ON (PLATE STOPPER DISENGAGES) AND THE SHIFT LEVER CAN SHIFT INTO OTHER RANGE THAN THE "P" RANGE.

2. KEY INTER LOCK MECHANISM

WITH THE IGNITION SW IN **ON** OR **ACC** POSITION, WHEN THE SHIFT LEVER IS PUT IN "P" RANGE (NO CONTINUITY BETWEEN P2 AND P OF LOCK CONTROL SW). THE CURRENT FLOWING FROM **TERMINAL 4** OF THE ECU → KEY INTER LOCK SOLENOID IS CUT OFF. THIS CAUSES THE KEY INTER LOCK SOLENOID TO TURN OFF (LOCK LEVER DISENGAGES FROM LOCK POSITION) AND THE IGNITION KEY CAN BE TURNED FROM **ACC** TO **LOCK** POSITION. IF THE IGNITION IS LEFT IN **ACC** OR **ON** POSITION WITH THE SHIFT LEVER IN OTHER THAN "P" RANGE, THEN AFTER APPROX. ONE HOUR THE ECU OPERATES TO RELEASE THE LOCK.

SERVICE HINTS

S 7 SHIFT LOCK ECU

1–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ACC** OR **ON** POSITION
3–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION
5–GROUND : ALWAYS CONTINUITY
6–GROUND : APPROX. **12** VOLTS WITH BRAKE PEDAL DEPRESSED

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
J 2	29	**K 1**	29	**S10** B	29
J 3	29	**S 7**	29		
J 6	29	**S10** A	29		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1B		
1E		
3A	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

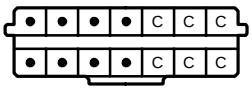
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL

: SPLICE POINTS

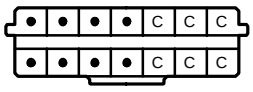
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 2	36	COWL WIRE	**I 5**	36	COWL WIRE

J 2



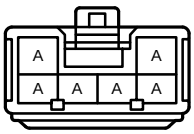
(HINT : SEE PAGE 7)

J 3



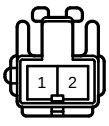
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J 6

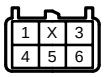


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K 1 BLUE



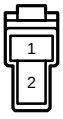
S 7



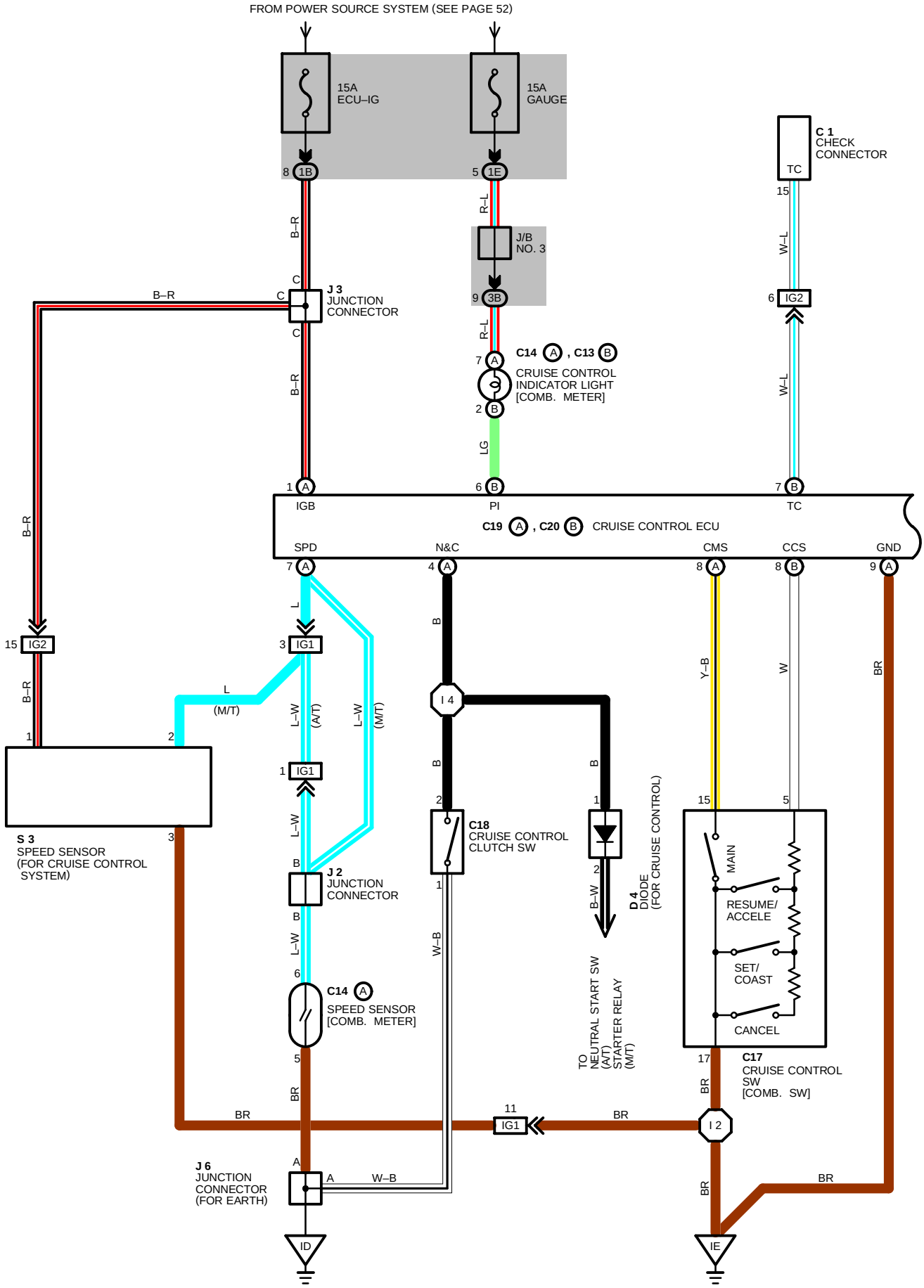
S10 Ⓐ

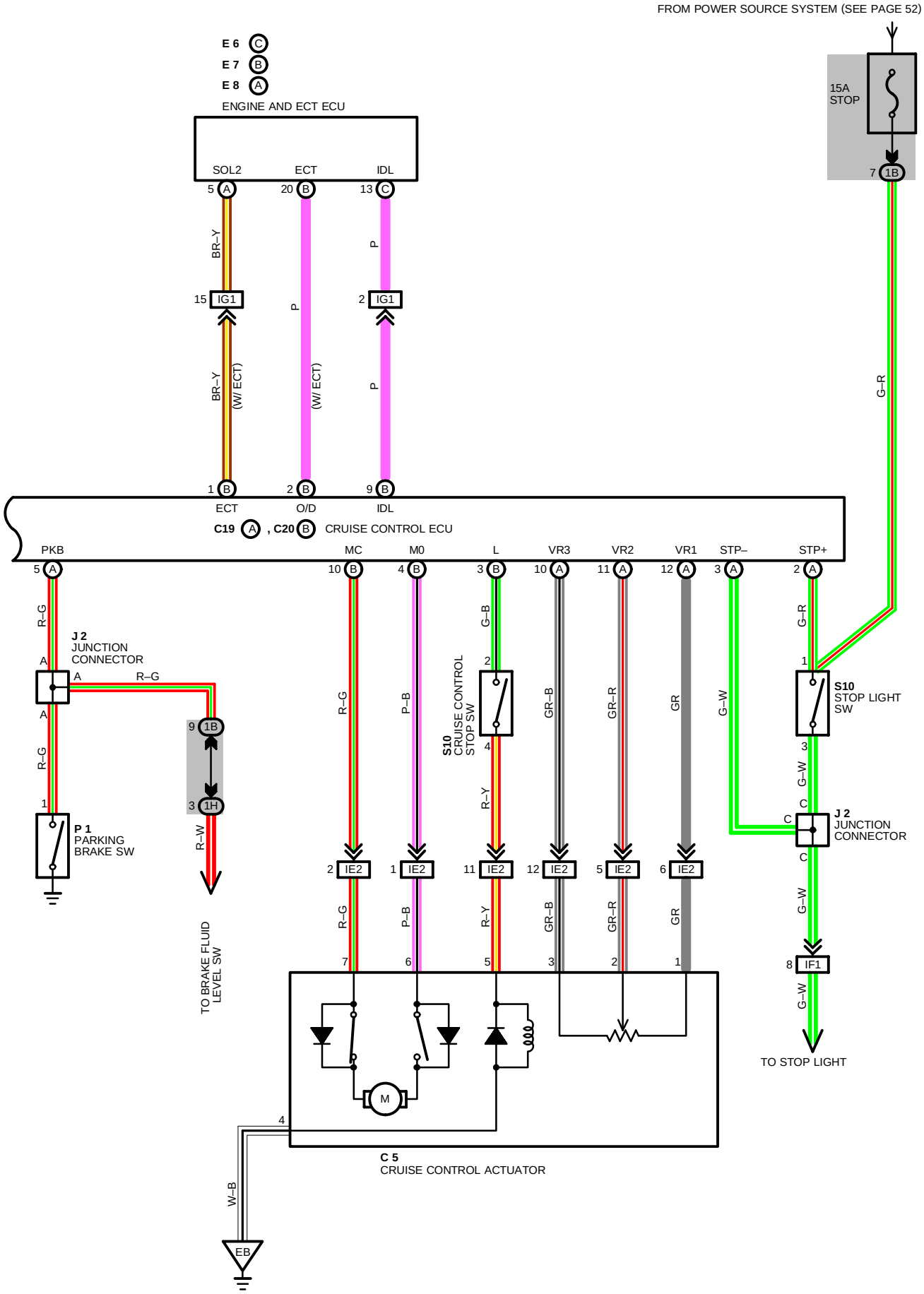


S10 Ⓑ



CRUISE CONTROL (MOTOR TYPE)




FROM POWER SOURCE SYSTEM (SEE PAGE 52)
15A
STOP
7 1B
G–R
E 6 C
E 7 B
E 8 A
ENGINE AND ECT ECU
SOL2
ECT
IDL
5 A
20 B
13 C
BR–Y
P
15 IG1
2 IG1
BR–Y (W/ ECT)
P (W/ ECT)
P
1 B
2 B
9 B
ECT
O/D
IDL
C19 A , C20 B CRUISE CONTROL ECU
PKB
MC
M0
L
VR3
VR2
VR1
STP–
STP+
5 A
10 B
4 B
3 B
10 A
11 A
12 A
3 A
2 A
R–G
G–B
G–R
J 2
JUNCTION
CONNECTOR
A
A
R–G
A
R–G
R–G
P–B
G–B
GR–B
GR–R
GR
G–W
G–R
S10
CRUISE CONTROL
STOP SW
S10
STOP LIGHT
SW
9 1B
3 1H
R–Y
3
G–W
C
C
J 2
JUNCTION
CONNECTOR
C
P 1
PARKING
BRAKE SW
R–W
2 IE2
1 IE2
11 IE2
12 IE2
5 IE2
6 IE2
R–G
P–B
R–Y
GR–B
GR–R
GR
G–W
8 IF1
7
6
5
3
2
1
G–W
TO BRAKE FLUID
LEVEL SW
TO STOP LIGHT
M
4
C 5
CRUISE CONTROL ACTUATOR
W–B
EB

CRUISE CONTROL (MOTOR TYPE)

SYSTEM OUTLINE

CURRENT IS APPLIED AT ALL TIMES THROUGH STOP FUSE TO **TERMINAL (A) 2** OF THE CONTROL ECU AND **TERMINAL 1** OF STOP LIGHT SWITCH, AND ALSO THROUGH THE DOME FUSE TO TERMINAL (A) 6 OF CRUISE CONTROL ECU.

WITH THE IGNITION SWITCH TURNED TO ON, THE CURRENT FLOWS THROUGH GAUGE FUSE TO **TERMINAL (A) 7** OF CRUISE CONTROL INDICATOR LIGHT. THE CURRENT THROUGH ECU–IG FUSE FLOWS TO **TERMINAL (A) 1** OF CRUISE CONTROL ECU AND **TERMINAL 1** OF CRUISE CONTROL SPEED SENSOR.

WHEN THE IGNITION SWITCH IS ON AND THE CRUISE CONTROL MAIN SWITCH IS TURNED ON, A SIGNAL IS INPUT FROM **TERMINAL 15** OF CRUISE CONTROL MAIN SWITCH TO **TERMINAL (A) 8** OF CRUISE CONTROL ECU. AS A RESULT, THE CRUISE CONTROL ECU FUNCTIONS AND THE CURRENT TO **TERMINAL (A) 1** OF CRUISE CONTROL ECU TO **TERMINAL (A) 9** OF CRUISE CONTROL ECU → **GROUND**, AND THE CRUISE CONTROL SYSTEM IS IN A CONDITION READY FOR OPERATION.

AT THE SAME TIME, THE CURRENT THROUGH THE GAUGE FUSE FLOWS FROM **TERMINAL (A) 7** OF CRUISE CONTROL INDICATOR LIGHT → **TERMINAL (B) 2** → **TERMINAL (B) 6** OF CRUISE CONTROL ECU → **TERMINAL (A) 9** → TO **GROUND**, CAUSING THE CRUISE CONTROL INDICATOR LIGHT TO LIGHT UP, INDICATING THAT THE CRUISE CONTROL IS READY FOR OPERATION.

1. SET OPERATION

WHEN THE CRUISE CONTROL MAIN SWITCH IS TURNED ON AND THE SET SWITCH IS PUSHED WITH THE VEHICLE SPEED WITHIN THE SET LIMIT (APPROX. **36**KM/H, **22**MPH TO **200**KM/H, **124**MPH), A SIGNAL IS INPUT TO **TERMINAL (B) 8** OF THE CRUISE CONTROL ECU AND THE VEHICLE SPEED AT THE TIME THE SET SWITCH IS RELEASED IS MEMORIZED IN THE ECU AS THE SET SPEED.

2. SET SPEED CONTROL

DURING CRUISE CONTROL DRIVING, THE ECU COMPARES THE SET SPEED MEMORIZED IN THE ECU WITH THE ACTUAL VEHICLE SPEED INPUT INTO **TERMINAL (A) 7** OF THE CRUISE CONTROL ECU FROM THE SPEED SENSOR, AND CONTROLS THE CRUISE CONTROL ACTUATOR TO MAINTAIN THE SET SPEED.

WHEN THE ACTUAL SPEED IS LOWER THAN THE SET SPEED, THE ECU CAUSES THE CURRENT TO THE CRUISE CONTROL ACTUATOR TO FLOW FROM **TERMINAL (B) 4** → **TERMINAL 6** OF CRUISE CONTROL ACTUATOR → **TERMINAL 7** → **TERMINAL (B) 10** OF CRUISE CONTROL ECU. AS A RESULT, THE MOTOR IN THE CRUISE CONTROL ACTUATOR IS ROTATED TO OPEN THE THROTTLE VALVE AND THE THROTTLE CABLE IS PULLED TO INCREASE THE VEHICLE SPEED. WHEN THE ACTUAL DRIVING SPEED IS HIGHER THAN THE SET SPEED, THE CURRENT TO CRUISE CONTROL ACTUATOR FLOWS FROM **TERMINAL (B) 10** OF ECU → **TERMINAL 7** OF CRUISE CONTROL ACTUATOR → **TERMINAL 6** → **TERMINAL (B) 4** OF CRUISE CONTROL ECU.

THIS CAUSES THE MOTOR IN THE CRUISE CONTROL ACTUATOR TO ROTATE TO CLOSE THE THROTTLE VALVE AND RETURN THE THROTTLE CABLE TO DECREASE THE VEHICLE SPEED.

3. COAST CONTROL

DURING THE CRUISE CONTROL DRIVING, WHILE THE COAST SWITCH IS ON, THE CRUISE CONTROL ACTUATOR RETURNS THE THROTTLE CABLE TO CLOSE THE THROTTLE VALVE AND DECREASE THE DRIVING SPEED. THE VEHICLE SPEED WHEN THE COAST SWITCH IS TURNED OFF AND IS MEMORIZED AND THE VEHICLE CONTINUES AT THE NEW SET SPEED.

4. ACCEL CONTROL

DURING CRUISE CONTROL DRIVING, WHILE THE ACCEL SWITCH IS TURNED ON, THE CRUISE CONTROL ACTUATOR PULLS THE THROTTLE CABLE TO OPEN THE THROTTLE VALVE AND INCREASE THE DRIVING SPEED. THE VEHICLE SPEED WHEN THE ACCEL SWITCH IS TURNED OFF IS MEMORIZED AND THE VEHICLE CONTINUES AT THE NEW SET SPEED.

5. RESUME CONTROL

UNLESS THE VEHICLE SPEED FALLS BELOW THE MINIMUM SPEED LIMIT (APPROX. **40**KM/H, **25**MPH) AFTER CANCELING THE SET SPEED BY THE CANCEL SWITCH, PUSHING THE RESUME SWITCH WILL CAUSE THE VEHICLE TO RESUME THE SPEED SET BEFORE CANCELLATION.

6. MANUAL CANCEL MECHANISM

IF ANY OF THE FOLLOWING OPERATIONS OCCURS DURING CRUISE CONTROL OPERATION, THE SAFETY MAGNET CLUTCH OF THE ACTUATOR MOTOR TURNS OFF AND THE MOTOR ROTATES TO CLOSE THE THROTTLE VALVE AND THE CRUISE CONTROL IS RELEASED.

- PLACING THE SHIFT LEVER IN “N” RANGE (NEUTRAL START SWITCH ON). “SIGNAL INPUT TO **TERMINAL (A) 4** OF ECU”
- DEPRESSING THE BRAKE PEDAL (STOP LIGHT SWITCH ON). “SIGNAL INPUT TO **TERMINAL (A) 2** OF ECU”
- DEPRESSING THE PARKING BRAKE PEDAL (PARKING BRAKE SWITCH ON). “SIGNAL INPUT TO **TERMINAL (A) 5** OF ECU”
- PUSH THE CANCEL SWITCH (CANCEL SWITCH ON). “SIGNAL INPUT TO **TERMINAL (B) 8**”

7. AUTO CANCEL FUNCTION

A) IF ANY OF THE FOLLOWING OPERATE CONDITIONS OCCURS DURING CRUISE CONTROL OPERATION. THE SET SPEED IS ERASED, CURRENT FLOW TO SAFETY MAGNETIC CLUTCH IS STOPPED AND THE CRUISE CONTROL IS RELEASED. (MAIN SWITCH TURNS OFF).

WHEN THIS OCCURS, THE IGNITION SWITCH MUST BE TURNED OFF ONCE BEFORE THE MAIN SWITCH WILL TURN ON.

- OVER CURRENT TO TRANSISTOR DRIVING MOTOR AND/OR SAFETY MAGNETIC CLUTCH.
- CURRENT TO CONTROL THE THROTTLE VALVE IN MOTOR BECOMES ALWAYS “ON”.
- OPEN CIRCUIT IN SAFETY MAGNETIC CLUTCH.
- MOMENTARY INTERRUPTION OF VEHICLE SPEED SIGNAL.
- THE RESUME SWITCH IS ALREADY ON WHEN THE MAIN SWITCH IS TURNED ON.
- SHORT CIRCUIT IN CRUISE CONTROL SWITCH.
- MOTOR DOES NOT OPERATE DESPITE THE MOTOR DRIVE SIGNAL BEING OUTPUT.

B) IF ANY OF THE FOLLOWING CONDITIONS OCCUR DURING CRUISE CONTROL OPERATION, THE SET SPEED IS ERASED AND THE CRUISE CONTROL IS RELEASED. (THE POWER OF SAFETY MAGNETIC CLUTCH IS CUT OFF UNTIL THE SET SWITCH IS “ON” AGAIN.)

- WHEN THE VEHICLE SPEED FALLS BELOW THE MINIMUM SPEED LIMIT, APPROX. **36** KM/H (**22** MPH).
- WHEN THE VEHICLE SPEED FALLS MORE THAN **16** KM/H (**10** MPH) BELOW THE SET SPEED, E.G. ON AN UPWARD SLOPE.
- WHEN POWER TO THE CRUISE CONTROL SYSTEM IS MOMENTARILY CUT OFF.

C) IF ANY OF THE FOLLOWING CONDITIONS OCCURS DURING CRUISE CONTROL OPERATION, THE CRUISE CONTROL IS RELEASED. BUT IN THIS CASE, THE SET SPEED IS NOT ERASED. IF THE VEHICLE SPEED IS MORE THAN THE MINIMUM SPEED LIMIT (APPROX. **36** KM/H **22** MPH), CRUISE CONTROL OPERATION IS POSSIBLE USING “SET” OR “RESUME” ON THE CONTROL SWITCH.

- OPEN CIRCUIT FOR **TERMINAL (A) 3** OF CRUISE CONTROL ECU AND **TERMINAL 3** OF STOP LIGHT SWITCH.

8. AUTOMATIC TRANSMISSION CONTROL FUNCTION

- IN OVERDRIVE. IF THE VEHICLE SPEED BECOMES LOWER THAN THE OVERDRIVE CUT SPEED (SET SPEED MINIMUM **4** KM/H, **2.5** MPH) DURING CRUISE CONTROL OPERATION, SUCH AS DRIVING UP A HILL, THE OVERDRIVE IS RELEASED AND THE POWER INCREASED TO PREVENT A REDUCTION IN VEHICLE SPEED.
- AFTER RELEASING THE OVERDRIVE, THE VEHICLE SPEED BECOMES HIGHER THAN THE OVERDRIVE RETURN SPEED (SET SPEED MINIMUM **2** KM/H **1.2** MPH) AND THE ECU JUDGES BY THE SIGNALS FROM POTENTIO METER OF THE ACTUATOR THAT THE UPWARD SLOPE HAS FINISHED, OVERDRIVE IS RESUMED AFTER APPROXIMATELY **6** SECONDS.
- DURING CRUISE CONTROL DRIVING, THE CRUISE CONTROL OPERATION SIGNAL IS OUTPUT FROM THE CRUISE CONTROL ECU TO THE ENGINE AND TRANSMISSION ECU. UPON RECEIVING THIS SIGNAL, THE ENGINE AND TRANSMISSION ECU CHANGES THE SHIFT PATTERN TO NORMAL.
 TO MAINTAIN SMOOTH CRUISE CONTROL OPERATION (ON A DOWNWARD SLOPE ECT.), LOCK–UP RELEASE OF THE TRANSMISSION WHEN THE IDLING POINT OF THE THROTTLE POSITION IS “ON” IS FORBIDDEN.

SERVICE HINTS

C 5 CRUISE CONTROL ACTUATOR

1–3 : APPROX. **2** KΩ
5–4 : APPROX. **38.5** Ω

C17 CRUISE CONTROL SW [COMB. SW]

15–17 : CONTINUITY WITH MAIN SW ON
5–17 : APPROX. **413** Ω WITH CANCEL SW ON
APPROX. **68** Ω WITH RESUME/ACCEL SW ON
APPROX. **198** Ω WITH SET/COAST SW ON

C19(A), C20(B) CRUISE CONTROL ECU

(A) 1–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION
(A)2, 6–GROUND : ALWAYS APPROX. **12** VOLTS
(A) 5–GROUND : CONTINUITY WITH PARKING BRAKE LEVER PULLED UP (ONE OF THE CANCEL SW) OR BRAKE LEVEL WARNING SW ON
(A) 7–GROUND : **1** PULSE EACH **40** CM (DRIVER VEHICLE SLOWLY)
(B) 8–GROUND : APPROX. **419** Ω WITH CANCEL SW ON IN CONTROL SW
APPROX. **68** Ω WITH RESUME/ACCEL SW ON IN CONTROL SW
APPROX. **198** Ω WITH SET/COAST SW ON IN CONTROL SW
(A) 9–GROUND : ALWAYS CONTINUITY

○ : PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C 1	26 (5S–FE)	**C19** A	28	**J 2**	29
C 5	26 (5S–FE)	**C20** B	28	**J 3**	29
C13 B	28	**D 4**	28	**J 6**	29
C14 A	28	**E 6** C	29	**P 1**	29
C17	28	**E 7** B	29	**S 3**	26 (5S–FE)
C18	28	**E 8** A	29	**S10**	29

CRUISE CONTROL (MOTOR TYPE)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	18	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1E		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
3B	22	COWL WIRE AND J/B NO.3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IE2	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
IG1	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)
IG2		

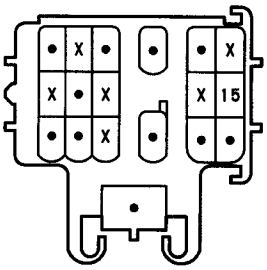
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EB	32 (5S–FE)	FRONT LEFT FENDER
	34 (4A–FE)	
ID	36	LEFT KICK PANEL
IE	36	INSTRUMENT PANEL BRACE LH

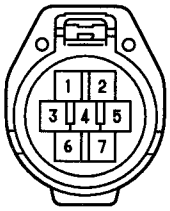
: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I2	36	COWL WIRE	**I4**	36	COWL WIRE

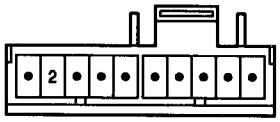
C 1 DARK GRAY



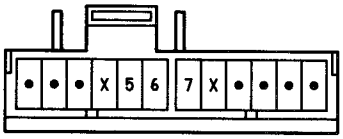
C 5 GRAY



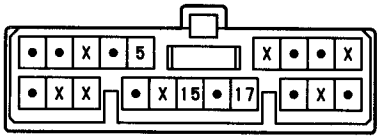
C13 (B) BROWN



C14 (A)



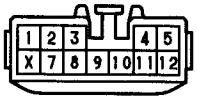
C17 BLACK



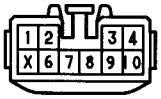
C18



C19 (A)



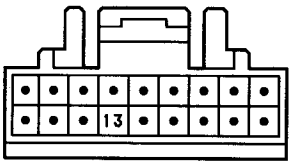
C20 (B)



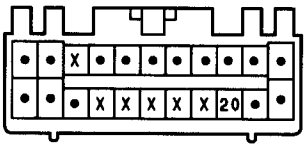
D 4



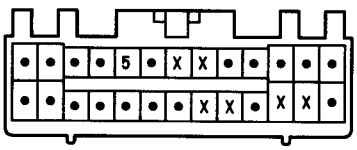
E 6 (C) DARK GRAY



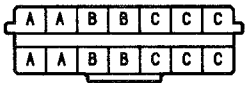
E 7 (B) DARK GRAY



E 8 (A) DARK GRAY

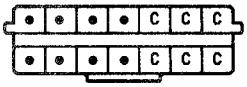


J 2



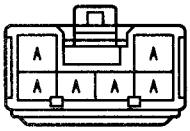
(HINT:SEE PAGE 7)

J 3



(HINT:SEE PAGE 7)

J 6



(HINT:SEE PAGE 7)

P 1 BLACK



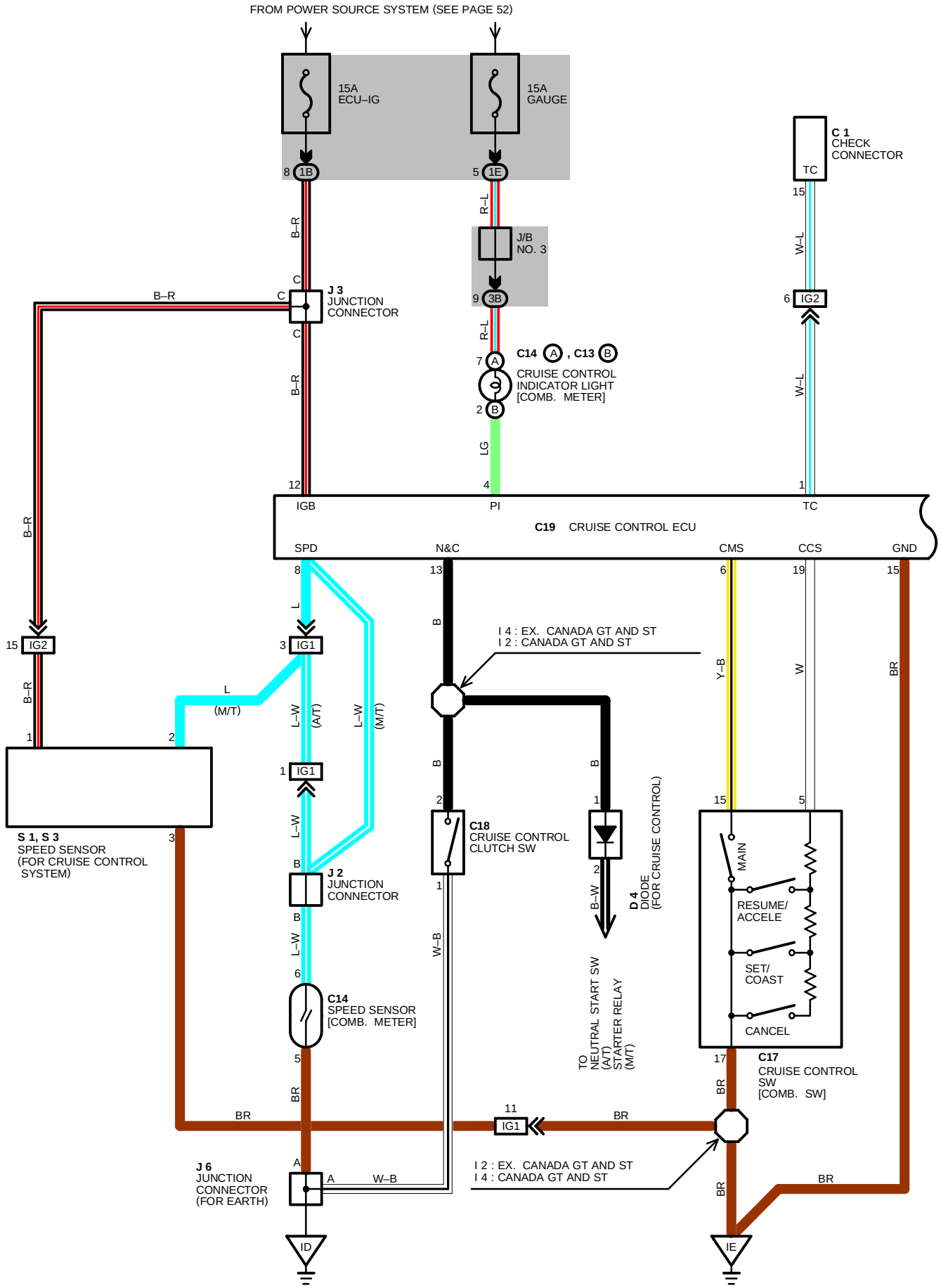
S 3 GRAY

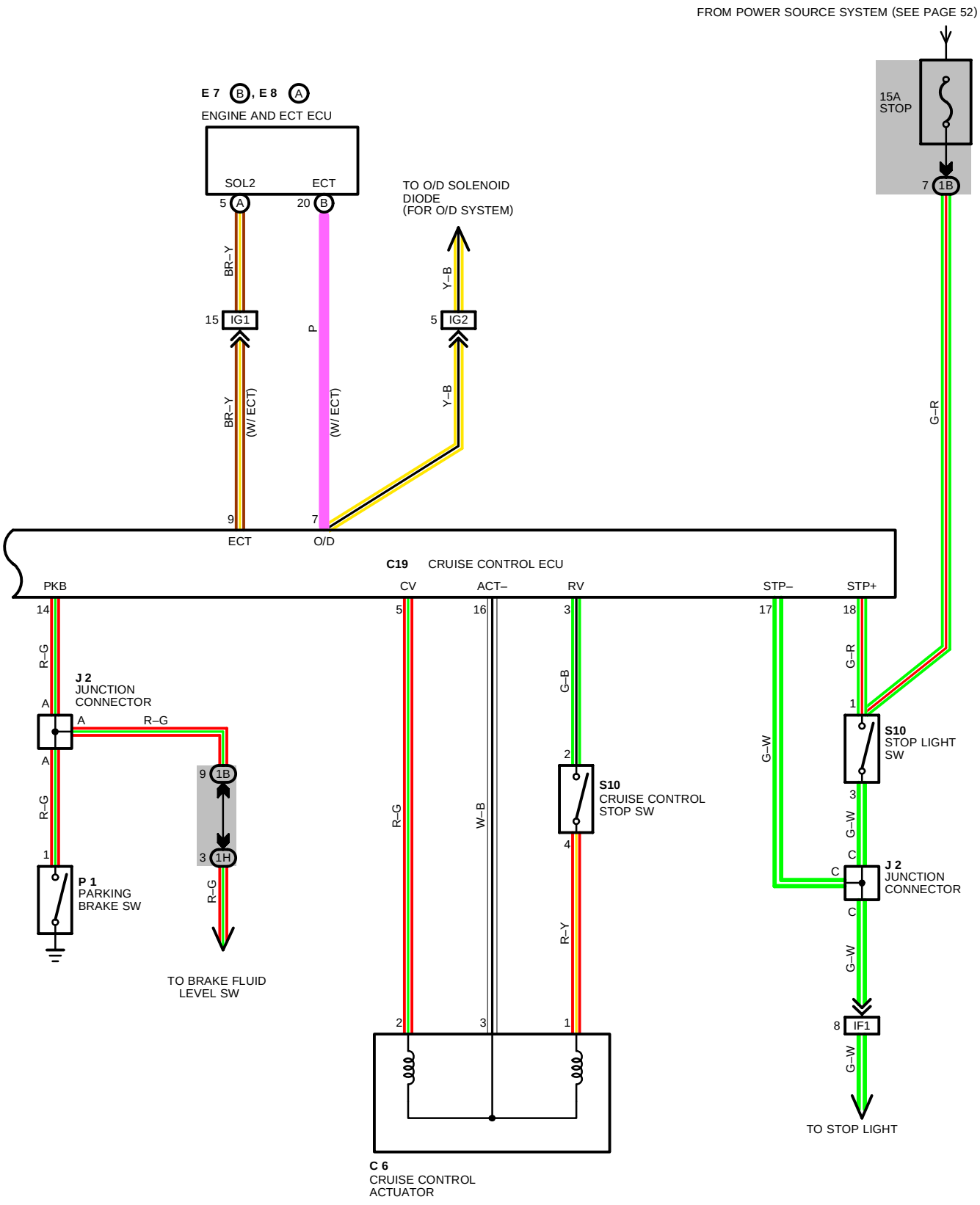


S10



CRUISE CONTROL (VACUUM TYPE)




FROM POWER SOURCE SYSTEM (SEE PAGE 52)
15A
STOP
7
1B
G–R
E 7 B, E 8 A
ENGINE AND ECT ECU
SOL2
ECT
5 A
20 B
TO O/D SOLENOID
DIODE
(FOR O/D SYSTEM)
BR–Y
Y–B
15 IG1
5 IG2
P
BR–Y
(W/ ECT)
(W/ ECT)
Y–B
9
7
ECT
O/D
C19 CRUISE CONTROL ECU
PKB
CV
ACT–
RV
STP–
STP+
14
5
16
3
17
18
R–G
G–B
G–R
J 2
JUNCTION
CONNECTOR
A
A
R–G
1
S10
STOP LIGHT
SW
G–W
9 1B
2
3
G–W
3 1H
S10
CRUISE CONTROL
STOP SW
C
C
J 2
JUNCTION
CONNECTOR
R–G
R–G
W–B
4
C
P 1
PARKING
BRAKE SW
R–Y
G–W
8 IF1
TO BRAKE FLUID
LEVEL SW
2
3
1
G–W
TO STOP LIGHT
C 6
CRUISE CONTROL
ACTUATOR

CRUISE CONTROL (VACUUM TYPE)

SYSTEM OUTLINE

CURRENT IS APPLIED AT ALL TIMES THROUGH STOP FUSE TO **TERMINAL 18** OF THE CRUISE CONTROL ECU AND **TERMINAL 1** OF THE STOP LIGHT SW.

WITH THE IGNITION SW TURNED TO ON, THE CURRENT FLOWS THROUGH GAUGE FUSE TO **TERMINAL (A) 7** OF THE COMBINATION METER AND THE CURRENT THROUGH ECU–IG FUSE FLOWS TO **TERMINAL 12** OF THE CRUISE CONTROL ECU.

WHEN THE IGNITION SW IS ON AND THE CRUISE CONTROL MAIN SW IS TURNED ON, A SIGNAL IS INPUT FROM **TERMINAL 15** OF THE CRUISE CONTROL MAIN SW TO **TERMINAL 6** OF THE CRUISE CONTROL ECU. AS A RESULT, THE CRUISE CONTROL ECU FUNCTIONS AND THE CURRENT TO **TERMINAL 12** OF THE CRUISE CONTROL ECU FLOWS TO **TERMINAL 15** OF THE CRUISE CONTROL ECU → **GROUND**, AND THE CRUISE CONTROL SYSTEM IS IN A CONDITION READY FOR OPERATION.

AT THE SAME TIME, THE CURRENT THROUGH GAUGE FUSE FLOWS FROM **TERMINAL (A) 7** → **TERMINAL (B) 2** → **TERMINAL 4** OF CRUISE CONTROL ECU → **TERMINAL 15** → TO **GROUND** AND CAUSING THE CRUISE CONTROL INDICATOR LIGHT TO LIMIT UP IN ORDER TO NOTE THE CRUISE CONTROL CAN START UP.

1. CRUISE CONTROL DRIVING

WHEN THE MAIN SW IS TURNED TO ON AND THE SET SW IS PUSHED IN WITH THE VEHICLE SPEED WITHIN THE SET LIMIT (APPROX. **40**KM/H, **25**MPH TO **200**KM/H, **124**MPH), A SIGNAL IS INPUT TO **TERMINAL 19** OF THE ECU AND THE VEHICLE SPEED AT THAT TIME IS RECORDED IN THE ECU MEMORY AS THE SET SPEED.

THE ECU COMPARES THE RECORDED SET SPEED WITH THE ACTUAL VEHICLE SPEED INPUT INTO **TERMINAL 8** FROM THE SPEED SENSOR AND CONTROLS THE CRUISE CONTROL ACTUATOR IN ORDER TO MAINTAIN THE SET VEHICLE SPEED.

WHEN THE ACTUAL VEHICLE SPEED IS LOWER THAN THE SET SPEED, ECU OPERATION LENGTHENS THE PERIOD OF CURRENT FLOW FROM **TERMINAL 5** OF THE ECU → **TERMINAL 2** OF THE ACTUATOR → THE CONTROL VALVE → **TERMINAL 3** → **TERMINAL 16** OF THE ECU, THE CABLE IS PULLED IN THE DIRECTION FOR OPENING THROTTLE VALVE AND THE VEHICLE SPEED INCREASES.

WHEN THE ACTUAL VEHICLE SPEED IS HIGHER THAN THE SET SPEED, A SHORTER PERIOD OF CURRENT FLOW TO THE CONTROL VALVE RETURNS THE CABLE IN THE DIRECTION FOR CLOSING THE THROTTLE VALVE AND THE VEHICLE SPEED DECREASES.

(ACTUATOR OPERATION)

WHEN THE CRUISE CONTROL SYSTEM OPERATES (THE SET SIGNAL IS INPUT), CURRENT FLOWS FROM THE ECU TO THE RELEASE VALVE, CLOSING THE ATMOSPHERIC INTAKE PORT.

WHEN THERE IS CONTINUITY TO THE CONTROL VALVE, VACUUM IS INTRODUCED INSIDE THE ACTUATOR, AND WHEN THERE IS NO CONTINUITY, VACUUM INTAKE STOPS AND ATMOSPHERE IS INTRODUCED. IN OTHER WORDS, THE ACTUATOR (THROTTLE VALVE) IS CONTROLLED BY CHANGING THE RATIO OF CONTINUITY AND NON–CONTINUITY TO THE CONTROL VALVE WITHIN A SPECIFIED PERIOD OF TIME.

2. CANCEL MECHANISM

IF ANY OF THE FOLLOWING OPERATIONS IS PERFORMED DURING CRUISE CONTROL, THEN CONTINUITY TO THE CONTROL VALVE AND THE RELEASE VALVE IS CUT OFF AND CRUISE CONTROL IS RELEASED.

- DEPRESSING THE CLUTCH PEDAL (CLUTCH SW ON), SIGNAL INPUT TO **TERMINAL 13** OF THE ECU. (M/T)
- PLACING THE NEUTRAL START SW IN “N” RANGE (NEUTRAL START SW ON), SIGNAL INPUT TO **TERMINAL 13** OF THE ECU. (A/T)
- DEPRESSING THE BRAKES PEDAL (STOP LIGHT SW ON), SIGNAL INPUT TO **TERMINAL 17** OF THE ECU.
- PULLING THE PARKING BRAKE LEVER (PARKING BRAKE SW ON), SIGNAL INPUT TO **TERMINAL 14** OF THE ECU.

3. COAST CONTROL

WHILE THE COAST SW IS ON DURING CRUISE CONTROL, CURRENT FLOW TO THE CONTROL VALVE AND RELEASE VALVE IS STOPPED AND THE VEHICLE DECELERATES UNTIL THE SW IS RELEASED. THE VEHICLE SPEED WHEN THE SW IS RELEASED IS THEN RECORDED IN MEMORY.

4. RESUME CONTROL

BY TURNING THE RESUME SW TO ON AFTER CANCELLATION OF THE CRUISE CONTROL SYSTEMS, THE VEHICLE SPEED WILL RETURN TO THE SPEED SET BEFORE CANCELLATION. PROVIDED THAT THE VEHICLE SPEED IS WITHIN THE SET LIMITS.

5. ACCEL CONTROL

WHEN THE ACCEL SW IS TURNED TO ON DURING CRUISE CONTROL DRIVING, CURRENT CONTINUES TO FLOW TO THE CONTROL VALVE AND THE VEHICLE ACCELERATES. THE VEHICLE SPEED WHEN THE SW IS TURNED OFF IS RECORDED IN MEMORY.

SERVICE HINTS

C19 CRUISE CONTROL ECU

(DISCONNECT THE ECU CONNECTOR)

15–GROUND : ALWAYS CONTINUITY

4–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION

8–GROUND : **1** PULSE EACH **40**CM, **15.75**IN. (DRIVE VEHICLE SLOWLY)

6–GROUND : CONTINUITY WITH MAIN SW ON

18–GROUND : ALWAYS APPROX. **12** VOLTS

17–GROUND : APPROX. **12** VOLTS WITH BRAKE PEDAL DEPRESSED (ONE OF THE CANCEL SW)

13–GROUND : CONTINUITY WITH CLUTCH PEDAL DEPRESSED (M/T)
APPROX. **12** VOLTS WITH IGNITION SW AT **ST** POSITION AND SHIFT LEVER IN **N** OR **P** RANGE (A/T)
(ONE OF THE CANCEL SW)

14–GROUND : CONTINUITY WITH PARKING BRAKE LEVER PULL UP, (ONE OF THE CANCEL SW) OR BRAKE LEVEL WARNING SW ON

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C 1	26 (5S–FE)	**C19**	28	**J 6**	29
C 6	26 (5S–FE), 27 (4A–FE)	**D 4**	28	**P 1**	29
C13 B	28	**E 7** B	29	**S 1**	27 (4A–FE)
C14 A	28	**E 8** A	29	**S 3**	26 (5S–FE)
C17	28	**J 2**	29	**S10**	29
C18	28	**J 3**	29		

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	18	COWL WIRE AND J/B NO.1 (LEFT KICK PANEL)
1E		
1H	18	ENGINE ROOM AND J/B NO. 1 (LEFT KICK PANEL)
3B	22	COWL WIRE AND J/B NO.3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IF1	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
IG1	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)
IG2		

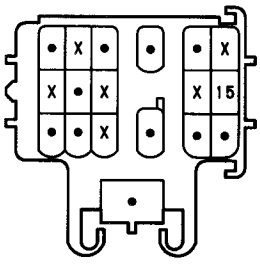
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL
IE	36	INSTRUMENT PANEL BRACE LH

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 2	36	COWL WIRE	**I 4**	36	COWL WIRE

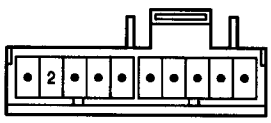
C 1 DARK GRAY



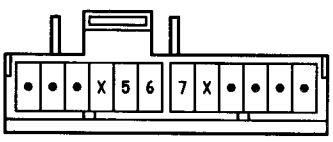
C 6



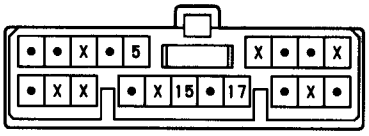
C13 (B) BROWN



C14 (A)



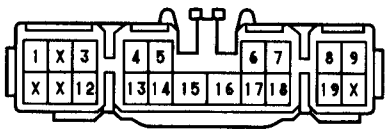
C17 BLACK



C18



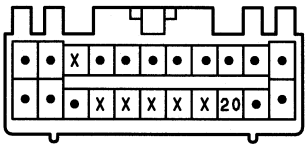
C19



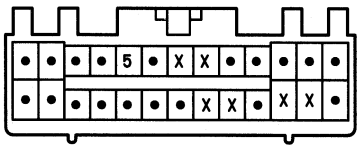
D 4



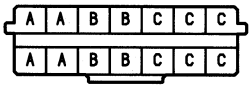
E 7 (B) DARK GRAY



E 8 (A) DARK GRAY

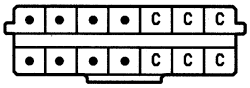


J 2



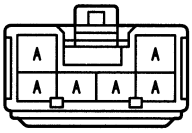
(HINT:SEE PAGE 7)

J 3



(HINT:SEE PAGE 7)

J 6



(HINT:SEE PAGE 7)

P 1 BLACK

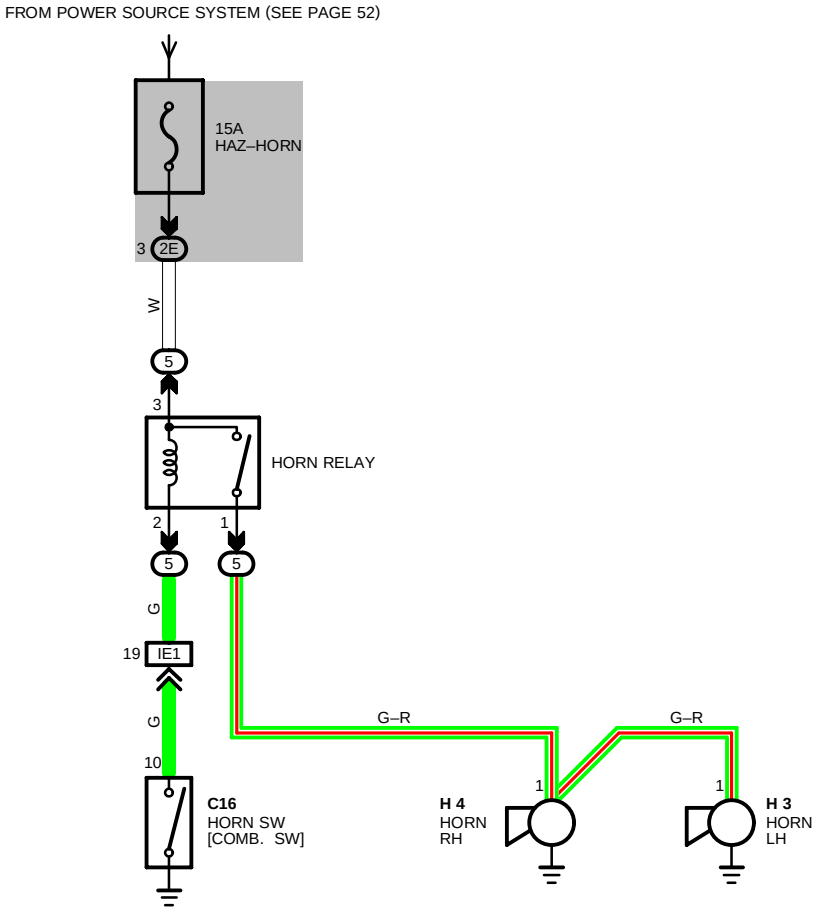


S 1, S 3 GRAY



S10





SERVICE HINTS

HORN RELAY

(5) 3– **(5)** 1 : CLOSED WITH HORN SW ON

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C16	28	**H 3**	26 (5S–FE), 27 (4A–FE)	**H 4**	26 (5S–FE), 27 (4A–FE)

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
5	24	R/B NO. 5 (ENGINE COMPARTMENT FRONT RIGHT)

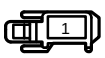
: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO.2 (NEAR THE BATTERY)

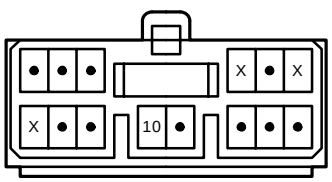
: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

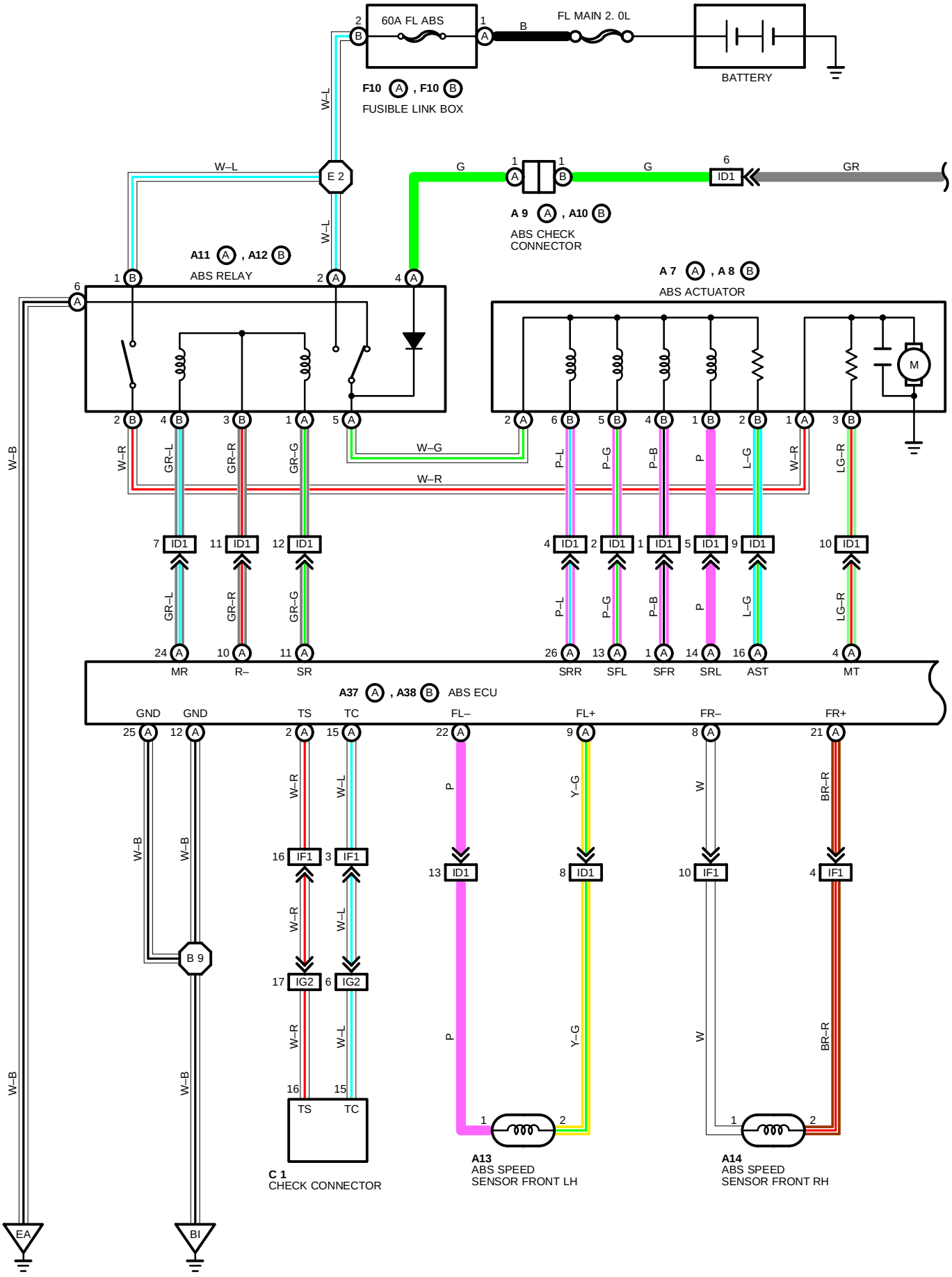
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IE1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)

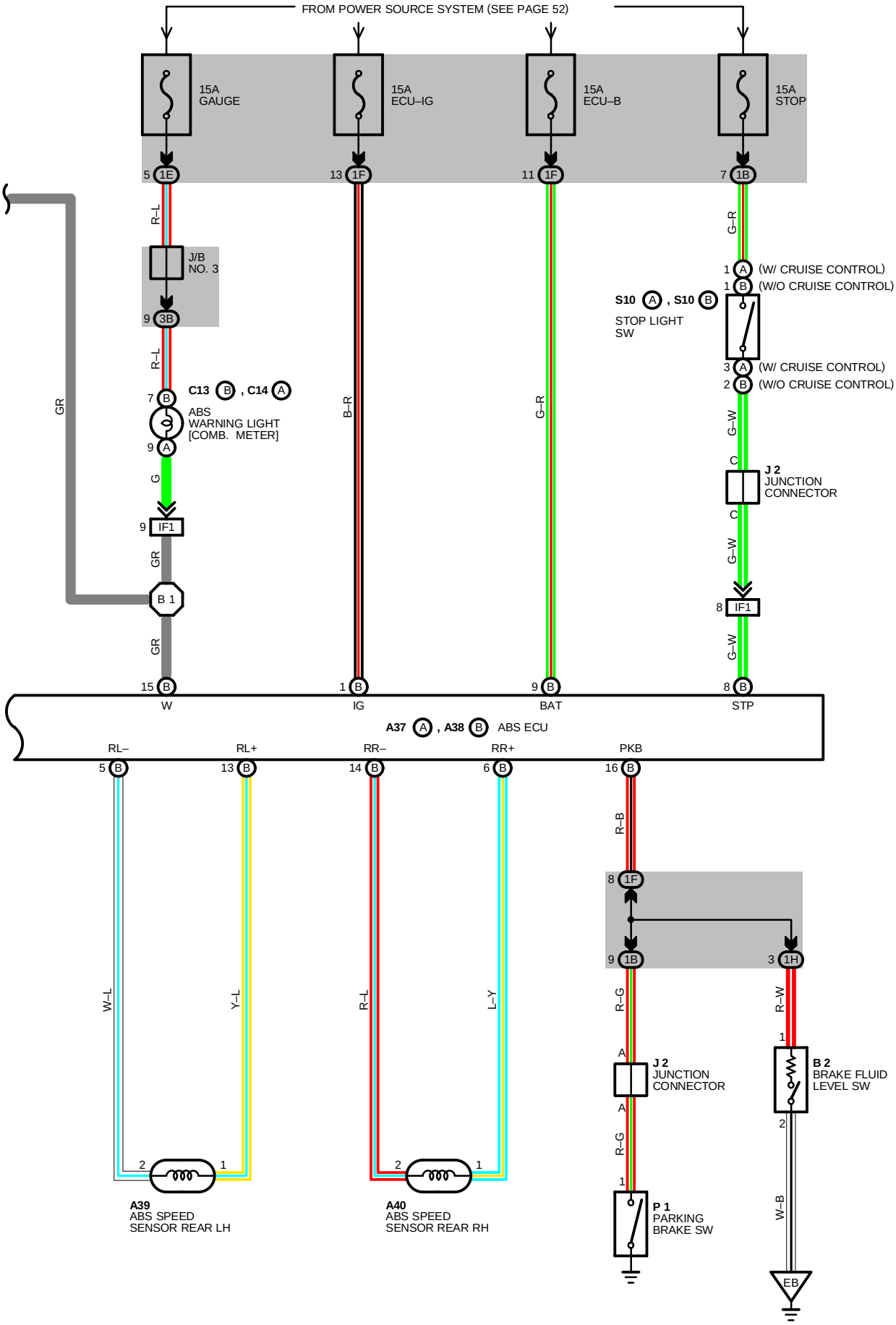
H 3, H 4 BLACK



C16 BLACK




60A FL ABS
FL MAIN 2. 0L
BATTERY
F10 A , F10 B
FUSIBLE LINK BOX
E 2
A9 A , A10 B
ABS CHECK CONNECTOR
A11 A , A12 B
ABS RELAY
A7 A , A8 B
ABS ACTUATOR
M
A37 A , A38 B ABS ECU
GND GND TS TC FL– FL+ FR– FR+
MR R– SR SRR SFL SFR SRL AST MT
B 9
C 1
CHECK CONNECTOR
A13
ABS SPEED SENSOR FRONT LH
A14
ABS SPEED SENSOR FRONT RH
EA
BI


FROM POWER SOURCE SYSTEM (SEE PAGE 52)
15A GAUGE
15A ECU–IG
15A ECU–B
15A STOP
5 1E
13 1F
11 1F
7 1B
R–L
J/B NO. 3
9 3B
R–L
7 B
C13 B , C14 A
ABS WARNING LIGHT [COMB. METER]
9 A
G
9 IF1
GR
B 1
GR
GR
15 B
W
B–R
1 B
IG
G–R
9 B
BAT
G–R
1 A (W/ CRUISE CONTROL)
1 B (W/O CRUISE CONTROL)
S10 A , S10 B
STOP LIGHT SW
3 A (W/ CRUISE CONTROL)
2 B (W/O CRUISE CONTROL)
G–W
C
J 2 JUNCTION CONNECTOR
C
G–W
8 IF1
G–W
8 B
STP
A37 A , A38 B ABS ECU
RL–
RL+
RR–
RR+
PKB
5 B
13 B
14 B
6 B
16 B
W–L
Y–L
R–L
L–Y
R–B
8 1F
9 1B
3 1H
R–G
R–W
A
J 2 JUNCTION CONNECTOR
A
R–G
1
P 1 PARKING BRAKE SW
1
B 2 BRAKE FLUID LEVEL SW
2
W–B
EB
2
1
A39 ABS SPEED SENSOR REAR LH
2
1
A40 ABS SPEED SENSOR REAR RH

ABS (ANTI–LOCK BRAKE SYSTEM)

SYSTEM OUTLINE

THIS SYSTEM CONTROLS THE RESPECTIVE BRAKE FLUID PRESSURES ACTING ON THE DISC BRAKE CYLINDERS OF THE RIGHT FRONT WHEEL, LEFT FRONT WHEEL AND REAR WHEELS WHEN THE BRAKES ARE APPLIED IN A PANIC STOP SO THAT THE WHEELS DO NOT LOCK. THIS RESULTS IN IMPROVED DIRECTIONAL STABILITY AND STEERABILITY DURING PANIC BRAKING.

1. INPUT SIGNALS

(1) SPEED SENSOR SIGNAL
THE SPEED OF THE WHEELS IS DETECTED AND INPUT TO **TERMINALS FL+, FR+, RL+** AND **RR+** OF THE ABS ECU.

(2) STOP LIGHT SW SIGNAL
A SIGNAL IS INPUT TO **TERMINAL STP** OF THE ABS ECU WHEN BRAKE PEDAL IS OPERATED.

(3) PARKING BRAKE SW SIGNAL
A SIGNAL IS INPUT TO **TERMINAL PKB** OF THE ABS ECU WHEN THE PARKING BRAKE IS OPERATED.

2. SYSTEM OPERATION

DURING SUDDEN BRAKING THE ABS ECU WHICH HAS SIGNALS INPUT FROM EACH SENSOR, CONTROLS THE CURRENT FLOWING TO THE SOLENOID INSIDE THE ACTUATOR AND LETS THE HYDRAULIC PRESSURE ACTING ON EACH WHEEL CYLINDER ESCAPE TO THE RESERVOIR. THE PUMP INSIDE THE ACTUATOR IS ALSO OPERATING AT THIS TIME AND IT RETURNS THE BRAKE FLUID FROM THE RESERVOIR TO THE MASTER CYLINDER. THUS PREVENTING LOCKING OF THE VEHICLE WHEELS.

IF THE ECU JUDGES THAT THE HYDRAULIC PRESSURE ACTING ON THE WHEEL CYLINDER IS INSUFFICIENT, THE CURRENT ACTING ON THE SOLENOID IS CONTROLLED AND THE HYDRAULIC PRESSURE IS REDUCTION, HOLDING AND INCREASE ARE REPLATED TO MAINTAIN VEHICLE STABILITY AND TO IMPROVE STEERABILITY DURING SUDDEN BRAKING.

SERVICE HINTS

A37(A), A38(B) ABS ECU

(CONNECT THE ECU CONNECTOR)

(A) 2–GROUND : APPROX. **12** VOLTS WITH THE IGNITION SW AT **ON** POSITION AND CHECK CONNECTOR TS–E1 NOT CONNECTED
(A)15–GROUND : APPROX. **12** VOLTS WITH THE IGNITION SW AT **ON** POSITION AND CHECK CONNECTOR TS–E1 NOT CONNECTED
(A)11–GROUND, (A) 13–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION ABS WARNING LIGHT GOES OFF
(A)14–GROUND, (A) 16–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION ABS WARNING LIGHT GOES OFF
(A)26–GROUND, (B) 15–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION ABS WARNING LIGHT GOES OFF
(A)12–GROUND : ALWAYS CONTINUITY
(A)25–GROUND : ALWAYS CONTINUITY
(B) 1–GROUND : APPROX.. **12** VOLTS WITH IGNITION SW AT **ON** POSITION
(B) 8–GROUND : APPROX. **12** VOLTS WITH BRAKE PEDAL DEPRESSED
(B) 9–GROUND : ALWAYS APPROX. **12** VOLTS
(B)16–GROUND : APPROX. **12** VOLTS WITH ENGINE RUNNING AND PARKING BRAKE LEVER RETURNED

(DISCONNECT THE ECU CONNECTOR)

(A) 1– **(A)**16 : APPROX. **6** Ω
(A)13– **(A)**16 : APPROX. **6** Ω
(A)14– **(A)**16 : APPROX. **6**Ω
(A)16– **(A)**26 : APPROX. **6** Ω
(A) 8– **(A)**21 : APPROX. **0.8–1.3** Ω
(A) 9– **(A)**22 : APPROX. **0.8–1.3** Ω
(A)10– **(A)**11 : APPROX. **60–100** Ω
(A)10– **(A)**24 : APPROX. **50–80** Ω
(B) 5–**(B)**13 : APPROX. **1.1–1.5** KΩ
(B) 6–**(B)**14 : APPROX. **1.1–1.5** KΩ

: PARTS LOCATION

CODE		SEE PAGE	CODE		SEE PAGE	CODE		SEE PAGE
A 7	A	26 (5S–FE)	A37	A	30 (L/B)	F10	A	26 (5S–FE)
A 8	B	26 (5S–FE)	A38	B	30 (L/B)		B	26 (5S–FE)
A 9	A	26 (5S–FE)	A39		30 (L/B)	J 2		29
A10	B	26 (5S–FE)	A40		30 (L/B)	P 1		29
A11	A	26 (5S–FE)	B 2		26 (5S–FE)	S10	A	29
A12	B	26 (5S–FE)	C 1		26 (5S–FE)		B	29
A13		26 (5S–FE)	C13	A	28			
A14		26 (5S–FE)	C14	B	28			

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1B	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
1F	18	FLOOR WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
3B	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
ID1	36	ENGINE ROOM MAIN WIRE AND FLOOR WIRE (LEFT KICK PANEL)
IF1	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
IG2	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (5S–FE)	FRONT RIGHT FENDER
EB	32 (5S–FE)	FRONT LEFT FENDER
BI	38 (L/B)	UNDER THE LEFT CENTER PILLAR

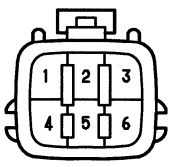
: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32 (5S–FE)	ENGINE ROOM MAIN WIRE	B 9	38 (L/B)	FLOOR WIRE
B 1	38 (L/B)	FLOOR WIRE			

A 7 (A) GRAY



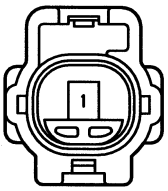
A 8 (B) GRAY



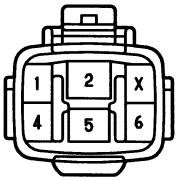
A 9 (A) DARK GRAY



A10 (B) DARK GRAY



A11 (A) GRAY



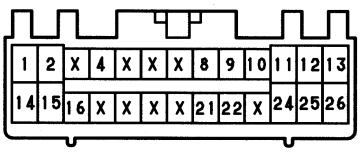
A12 (B) GRAY



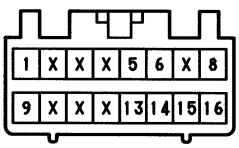
A13, A14 GRAY



A37 (A)



A38 (B) DARK GRAY



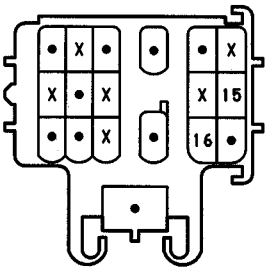
A39, A40 GRAY



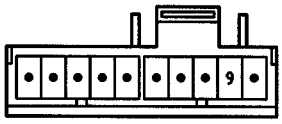
B 2 GRAY



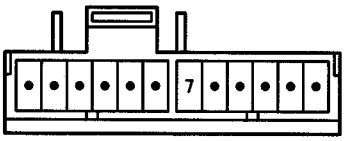
C 1 DARK GRAY



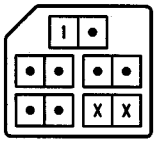
C13 (B) BROWN



C14 (A)



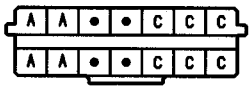
F10 (A) BLACK



F10 (B) BLACK



J 2



(HINT:SEE PAGE 7)

P 1 BLACK



(W/ CRUISE S10 (A) CONTROL)



(W/O CRUISE S10 (B) CONTROL)



NOTICE: When inspecting or repairing the SRS AIRBAG, perform the operation in accordance with the following precautionary instructions and the procedure and precautions in the Repair Manual for the applicable model year.

- Malfunction symptoms of the airbag system are difficult to confirm, so the diagnostic codes become the most important source of information when troubleshooting.

 When troubleshooting the airbag system, always inspect the diagnostic codes before disconnecting the battery.

- Work must be started after 20 seconds or longer from the time the Ignition SW is set to the “LOCK” position and the negative (–) terminal cable is disconnected from the battery.

 (The airbag system is equipped with a back–up power source so that if work is started within 20 seconds of disconnecting the negative (–) terminal cable of the battery, the airbag may be deployed.)

 When the negative (–) terminal cable is disconnected from the battery, memory of the clock and audio systems will be cancelled. So before starting work, make a record of the contents memorized by each memory system. Then when work is finished, reset the clock and audio system as before.

 When the vehicle has tilt and telescopic steering, power seat, outside rear view mirror and power shoulder belt anchorage, which are all equipped with memory function, it is not possible to make a record of the memory contents. So when the operation is finished, it will be necessary to explain this fact to the customer, and request the customer to adjust the features and reset the memory.

 To avoid erasing the memory of each memory system, never use a back–up power supply from outside the vehicle.

- When removing the steering wheel pad or handling a new steering wheel pad, keep the pad upper surface facing upward. Also, lock the lock lever of the twin lock type connector at the rear of the pad and take care not to damage the connector.

 (Storing the pad with its metallic surface up may lead to a serious accident if the airbag inflates for some reason.)

- Store the steering wheel pad where the ambient temperature remains below 93˚C (200˚F), without high humidity and away from electrical noise.

- Never use airbag parts from another vehicle. When replacing airbag parts, replace them with new parts.

- Never disassemble or repair the steering wheel pad, center airbag sensor assembly or front airbag sensors.

- Before repairing the body, remove the airbag sensors if during repair shocks are likely to be applied to the sensors due to vibration of the body or direct tapping with tools or other parts.

- Do not reuse a steering wheel pad or front airbag sensors.

 After evaluating whether the center airbag sensor assembly is damaged or not, decide whether or not to reuse it. (See the Repair Manual for the method for evaluating the center airbag sensor assembly.)

- When troubleshooting the airbag system, use a high–impedance (Min. 10kΩ/V) tester.

- The wire harness of the airbag system is combined with the cowl wiring harness assembly.

 The vehicle wiring harness exclusively for the airbag system is distinguished by corrugated yellow tubing, as are the connectors.

- Do not measure the resistance of the airbag squib.

 (It is possible this will deploy the airbag and is very dangerous.)

- If the wire harness used in the airbag system is damaged, replace the whole wire harness assembly.

 When the connector to the airbag front sensors can be repaired alone (when there is no damage to the wire harness), use the repair wire specially designed for the purpose.

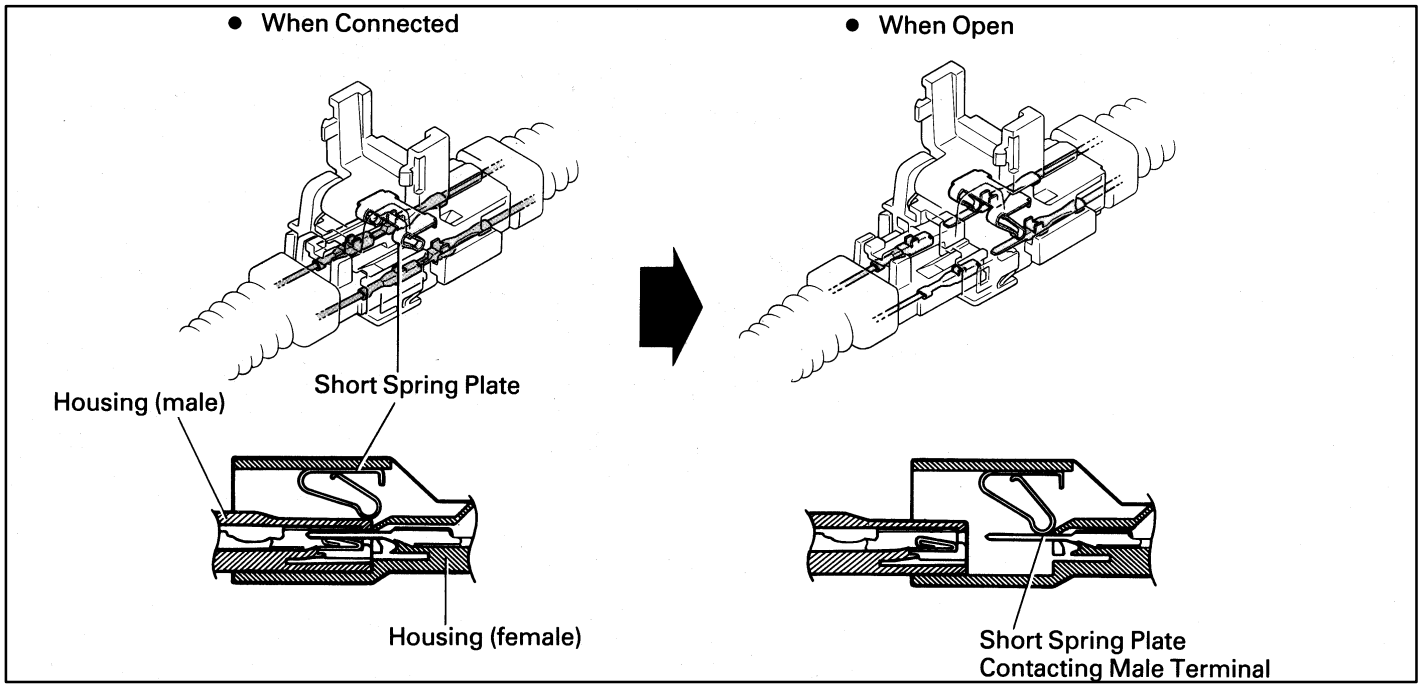
 (Refer to the Repair Manual for the applicable Model year for details of the replacement method.)

- INFORMATION LABELS (NOTICES) are attached to the periphery of the airbag components. Follow the instructions on the notices.

The airbag system has connectors which possess the functions described below:

1. AIRBAG ACTIVATION PREVENTION MECHANISM

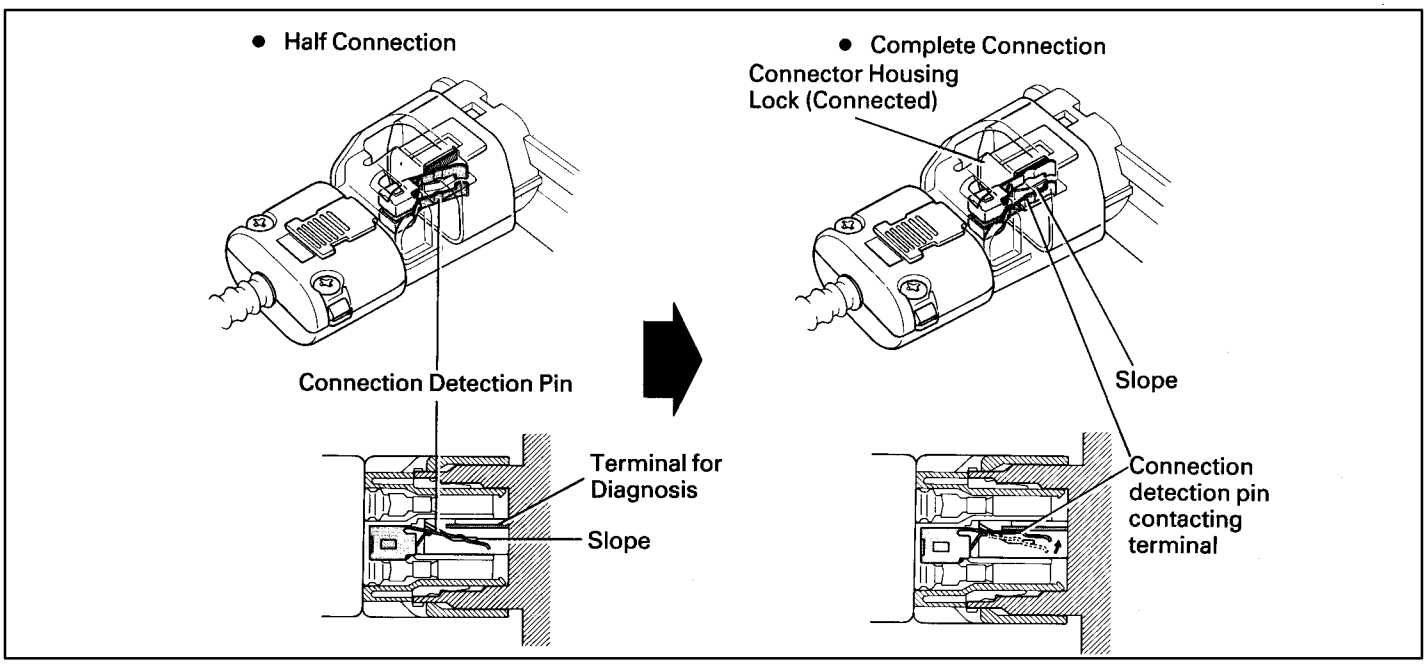
 Each connector contains a short spring plate. When the connector is disconnected, the short spring plate automatically connects the power source and grounding terminals of the squib to preclude a potential difference between the terminals.



2. ELECTRICAL CONNECTION CHECK MECHANISM

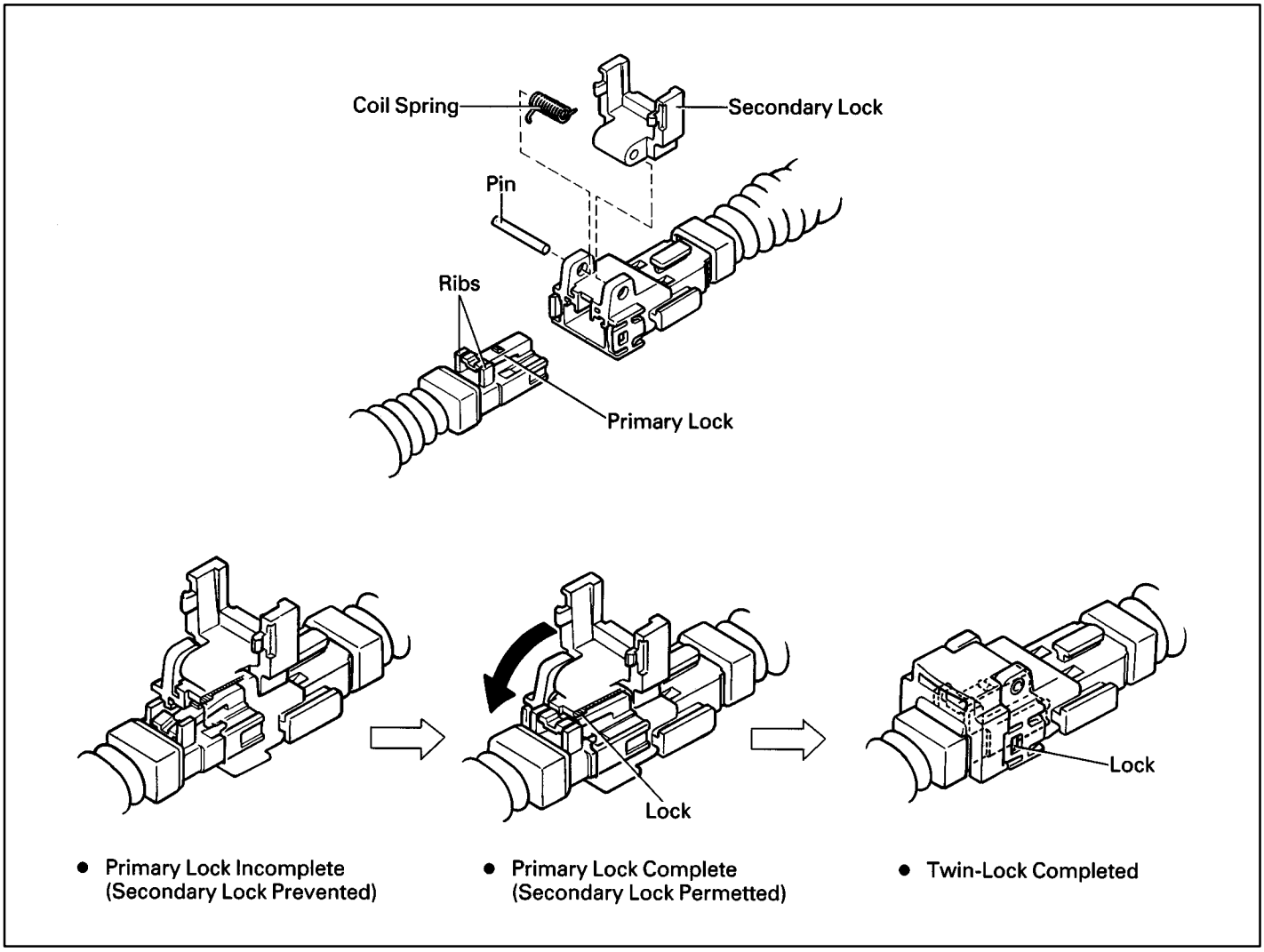
 This mechanism is designed to electrically check if connectors are connected correctly and completely.

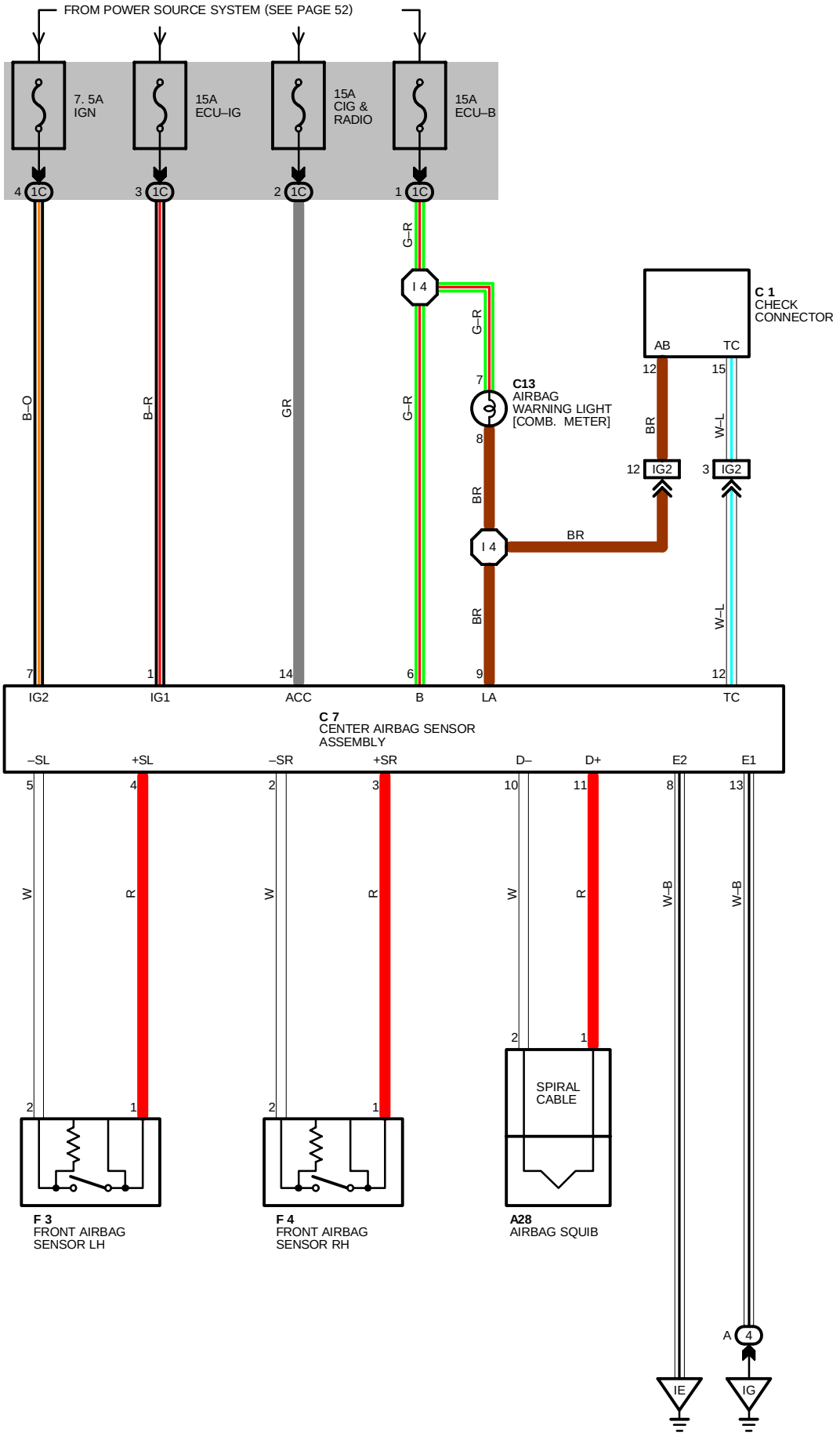
 The electrical connection check mechanism is designed so that the connection detection pin connects with the diagnosis terminals when the connector housing lock is in the locked condition.



3. CONNECTOR TWIN–LOCK MECHANISM

With this mechanism connectors (male and female connectors) are locked by two locking devices to increase connection reliability. If the primary lock is incomplete, ribs interfere and prevent the secondary lock.




FROM POWER SOURCE SYSTEM (SEE PAGE 52)
7. 5A
IGN
15A
ECU–IG
15A
CIG &
RADIO
15A
ECU–B
4 1C
3 1C
2 1C
1 1C
G–R
I 4
G–R
C 1
CHECK
CONNECTOR
AB
TC
12
15
7
C13
AIRBAG
WARNING LIGHT
[COMB. METER]
8
BR
W–L
12 IG2
3 IG2
BR
I 4
BR
W–L
B–O
B–R
GR
G–R
BR
7
1
14
6
9
12
IG2
IG1
ACC
B
LA
TC
C 7
CENTER AIRBAG SENSOR
ASSEMBLY
–SL
+SL
–SR
+SR
D–
D+
E2
E1
5
4
2
3
10
11
8
13
W
R
W
R
W
R
W–B
W–B
2
1
2
1
2
1
SPIRAL
CABLE
A 4
IE
IG
F 3
FRONT AIRBAG
SENSOR LH
F 4
FRONT AIRBAG
SENSOR RH
A28
AIRBAG SQUIB

SYSTEM OUTLINE

THE SRS (SUPPLEMENTAL RESTRAINT SYSTEM) AIRBAG IS A DRIVER PROTECTION DEVICE WHICH HAS A SUPPLEMENTAL ROLE TO THE SEAT BELTS.

CURRENT FLOWS CONSTANTLY TO **TERMINAL 6** OF THE CENTER AIRBAG SENSOR ASSEMBLY. WHEN THE IGNITION SW IS TURNED TO ACC OR ON, CURRENT FROM THE CIG & RAD FUSE FLOW TO **TERMINAL 14** OF THE CENTER AIRBAG SENSOR ASSEMBLY. ONLY WHEN THE IGNITION SW IS ON DOES THE CURRENT FROM THE ECU–IG FUSE FLOW TO **TERMINAL 1,** AND THE CURRENT FROM THE IGN FUSE TO **TERMINAL 7**.

IF AN ACCIDENT OCCURS WHILE DRIVING, DECELERATION CAUSED BY A FRONTAL IMPACT IS DETECTED BY EACH SENSOR AND SWITCH, AND WHEN THE FRONTAL IMPACT EXCEEDS A SET LEVEL (WHEN THE MERCURY SW BUILT INTO THE CENTER AIRBAG SENSOR ASSEMBLY IS ON AND THE CENTER AIRBAG SENSOR IS ON, FRONT AIRBAG SENSORS ARE OFF), CURRENT FROM THE CIG & RAD, ECU–IG OR IGN FUSE FLOWS TO **TERMINAL 11** OF THE CENTER AIRBAG SENSOR ASSEMBLY → **TERMINAL 1** OF THE AIRBAG SQUIB → SQUIB → **TERMINAL 2** → **TERMINAL 10** OF CENTER AIRBAG SENSOR ASSEMBLY → **TERMINAL 8, TERMINAL 13** OR **BODY GROUND** → **GROUND**.

WHEN THE MERCURY SW BUILT INTO THE CENTER AIRBAG SENSOR ASSEMBLY IS ON AND THE FRONT AIRBAG SENSOR LH OR RH IS ON, CENTER AIRBAG SENSOR IS OFF CURRENT FROM THE CIG & RAD, ECU–IG OR IGN FUSE FLOWS TO **TERMINAL 11** OF THE CENTER AIRBAG SENSOR ASSEMBLY → **TERMINAL 1** OF THE AIRBAG SQUIB → SQUIB →**TERMINAL 2** → **TERMINAL 10**, OF THE CENTER AIRBAG SENSOR ASSEMBLY → **TERMINAL 3** OR **4** → **TERMINAL 1** OF FRONT AIRBAG SENSOR → **TERMINAL 2** → **TERMINAL 2** OR **5** OF CENTER AIRBAG SENSOR ASSEMBLY → **TERMINAL 8, TERMINAL 13** OR **BODY GROUND** → **GROUND.**

WHEN THE MERCURY SW BUILT INTO THE CENTER AIRBAG SENSOR ASSEMBLY IS ON, AND THE FRONT AIRBAG SENSOR LH OR RH IS ON AND CENTER AIRBAG SENSOR IS ON ONE OF THE ABOVE–MENTIONED CIRCUITS IS ACTIVATED SO THAT CURRENT FLOWS TO THE AIRBAG SQUIB AND CAUSES IT TO OPERATE. THE BAG STORED INSIDE THE STEERING WHEEL PAD IS INSTANTANEOUSLY EXPANDED TO SOFTEN THE SHOCK TO THE DRIVER.

THE REASON WHY THERE ARE MULTIPLE POWER SOURCES AND GROUND POINTS IS SO THAT IN THE EVENT THAT ONE OR TWO OF THE POWER SOURCES AND GROUND POINTS DO NOT WORK FOR SOME REASON, THE REMAINING POWER SOURCE AND GROUND POINT WILL BE AVAILABLE TO COMPENSATE.

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A28	28	**C 7**	28	**F 3**	26 (5S–FE), 27 (4A–FE)
C 1	26 (5S–FE), 27 (4A–FE)	**C13**	28	**F 4**	26 (5S–FE), 27 (4A–FE)

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
4	24	R/B NO. 4 (RIGHT KICK PANEL)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1C	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IG2	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)

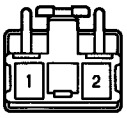
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IE	36	INSTRUMENT PANEL BRACE LH
IG	36	R/B NO. 4 SET BOLT

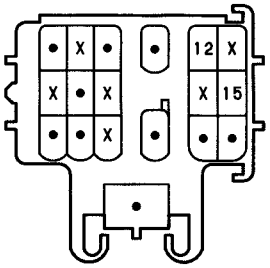
: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 4	36	COWL WIRE			

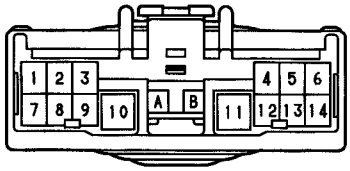
A28 YELLOW



C 1 DARK GRAY

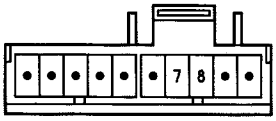


C 7 YELLOW

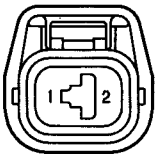


*1

C13 BROWN

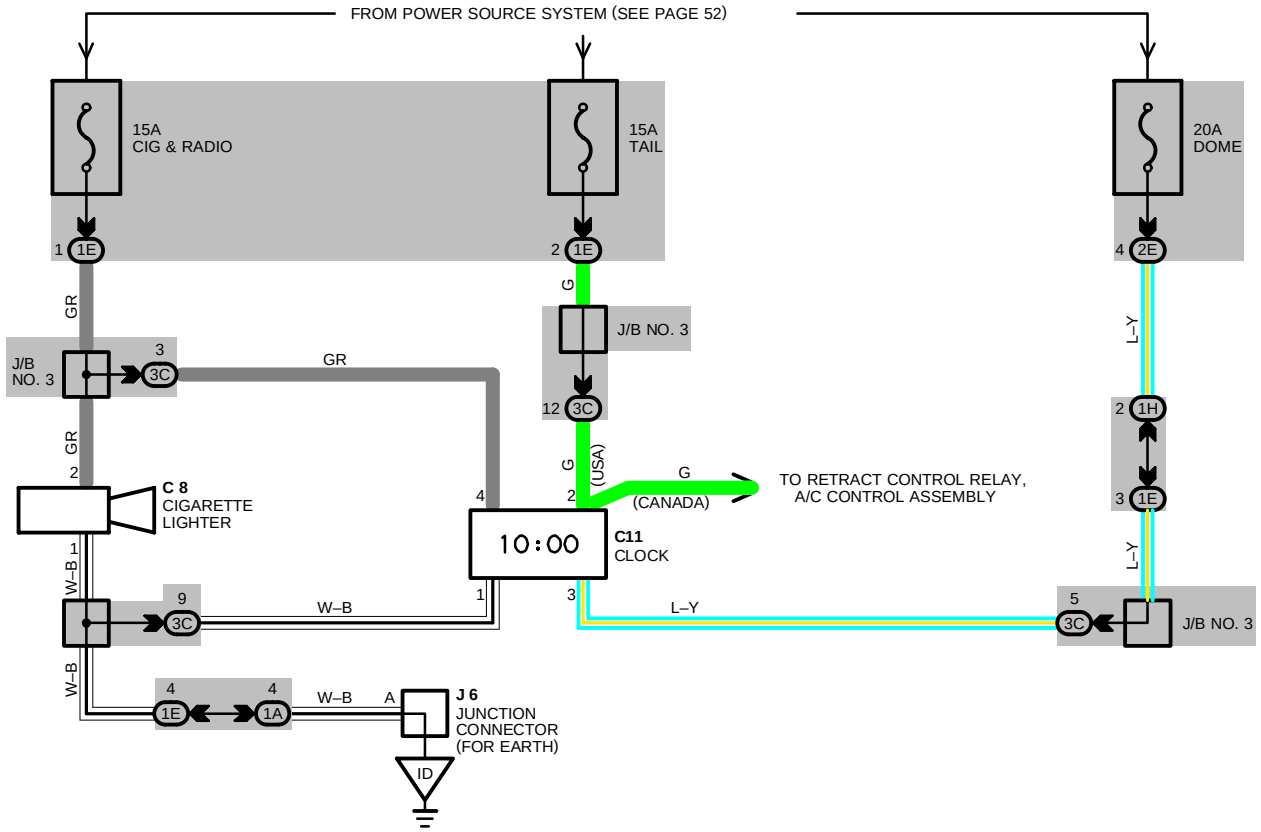


F 3, F 4 YELLOW



*1

*1: WITH ELECTRICAL CONNECTION CHECK MECHANISM (SEE PAGE 162)



SERVICE HINTS

C 8 CIGARETTE LIGHTER

2–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ACC** OR **ON** POSITION
1–GROUND : ALWAYS CONTINUITY

C11 CLOCK

3–GROUND : ALWAYS APPROX. **12** VOLTS (POWER FOR CLOCK)
4–GROUND : APPROX. .**12** VOLTS WITH IGNITION SW AT **ACC** OR **ON** POSITION (POWER FOR INDICATION)
2–GROUND : APPROX. .**12** VOLTS WITH LIGHT CONTROL SW AT **TAIL** OR **HEAD** POSITION
APPROX. .**12** VOLTS WITH ENGINE RUNNING (CANADA)
1–GROUND : ALWAYS CONTINUITY

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
C 8	28	**C11**	28	**J 6**	29

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
3C	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
ID	36	LEFT KICK PANEL

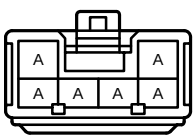
C 8



C11

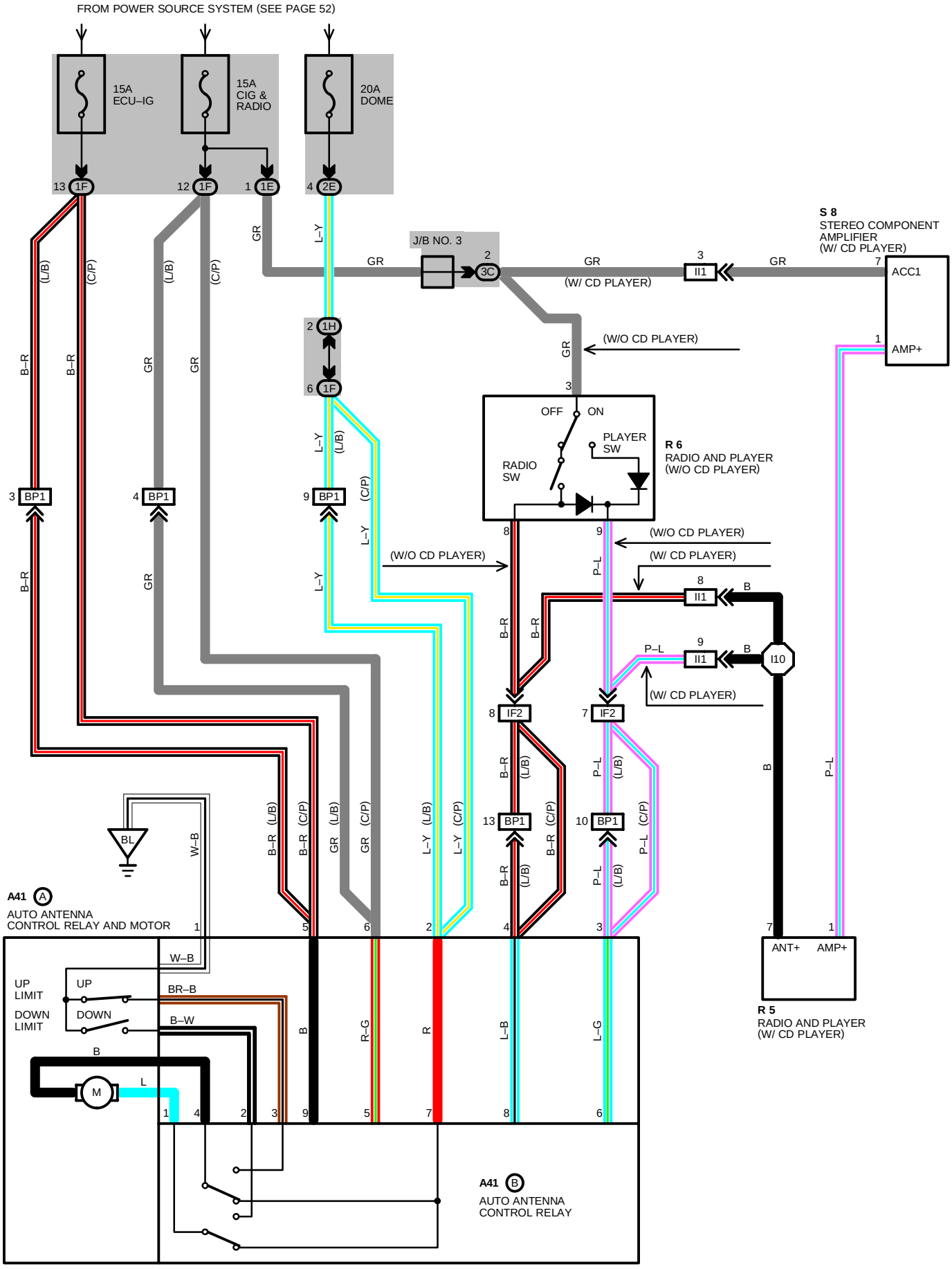


J 6



(HINT : SEE PAGE 7)

AUTO ANTENNA



SERVICE HINTS

A41(B) AUTO ANTENNA CONTROL RELAY

9–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION
5–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ACC** OR **ON** POSITION
7–GROUND : ALWAYS APPROX. **12** VOLTS
8–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ACC** OR **ON** POSITION AND RADIO SW ON
3–GROUND : CONTINUITY (UPPER LIMIT SW ON) UNLESS ANTENNA AT **UP** STOP
2–GROUND : CONTINUITY (DOWN LIMIT SW ON) UNLESS ANTENNA AT **DOWN** STOP
4–3 : CLOSED WITH IGNITION SW AT **ACC** OR **ON** POSITION AND RADIO SW ON AND PLAYER SW OFF UNTIL ANTENNA AT **UPPERMOST** POSITION
1–2 : CLOSED WITH IGNITION SW AT **ACC** OR **ON** POSITION AND RADIO SW OFF AND PLAYER SW OFF UNTIL ANTENNA AT **LOWERMOST** POSITION
1–2 : CLOSED WITH IGNITION SW OFF UNTIL ANTENNA AT **LOWERMOST** POSITION

○ : PARTS LOCATION

CODE		SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A41	A	30 (L/B), 31 (C/P)	**R 5**	29	**S 8**	29
	B	30 (L/B), 31 (C/P)	**R 6**	29		

⬭ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1E	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1F	18	FLOOR WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
3C	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

▭ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

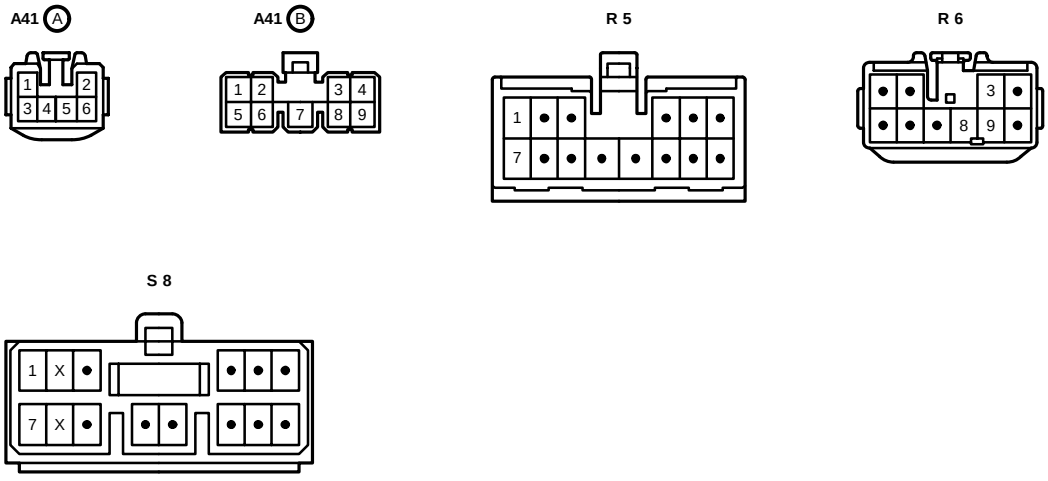
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IF2	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
II1	36	COWL WIRE AND CONSOLE BOX WIRE (INSTRUMENT PANEL CENTER)
BP1	38 (L/B)	FLOOR WIRE AND LUGGAGE ROOM WIRE (LEFT QUARTER PANEL CENTER)

▽ : GROUND POINTS

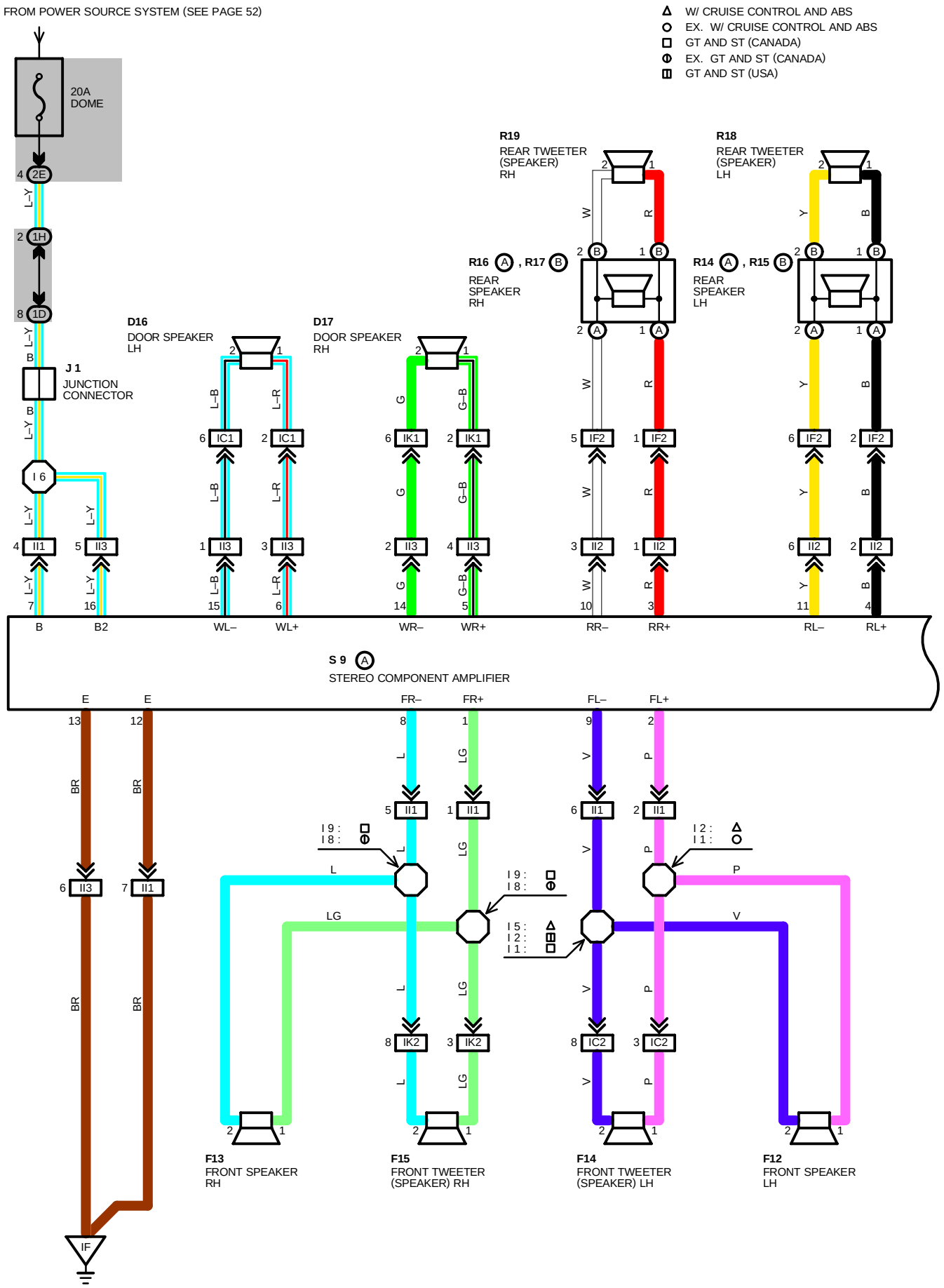
CODE	SEE PAGE	GROUND POINTS LOCATION
BL	38 (L/B) 40 (C/P)	BACK PANEL CENTER

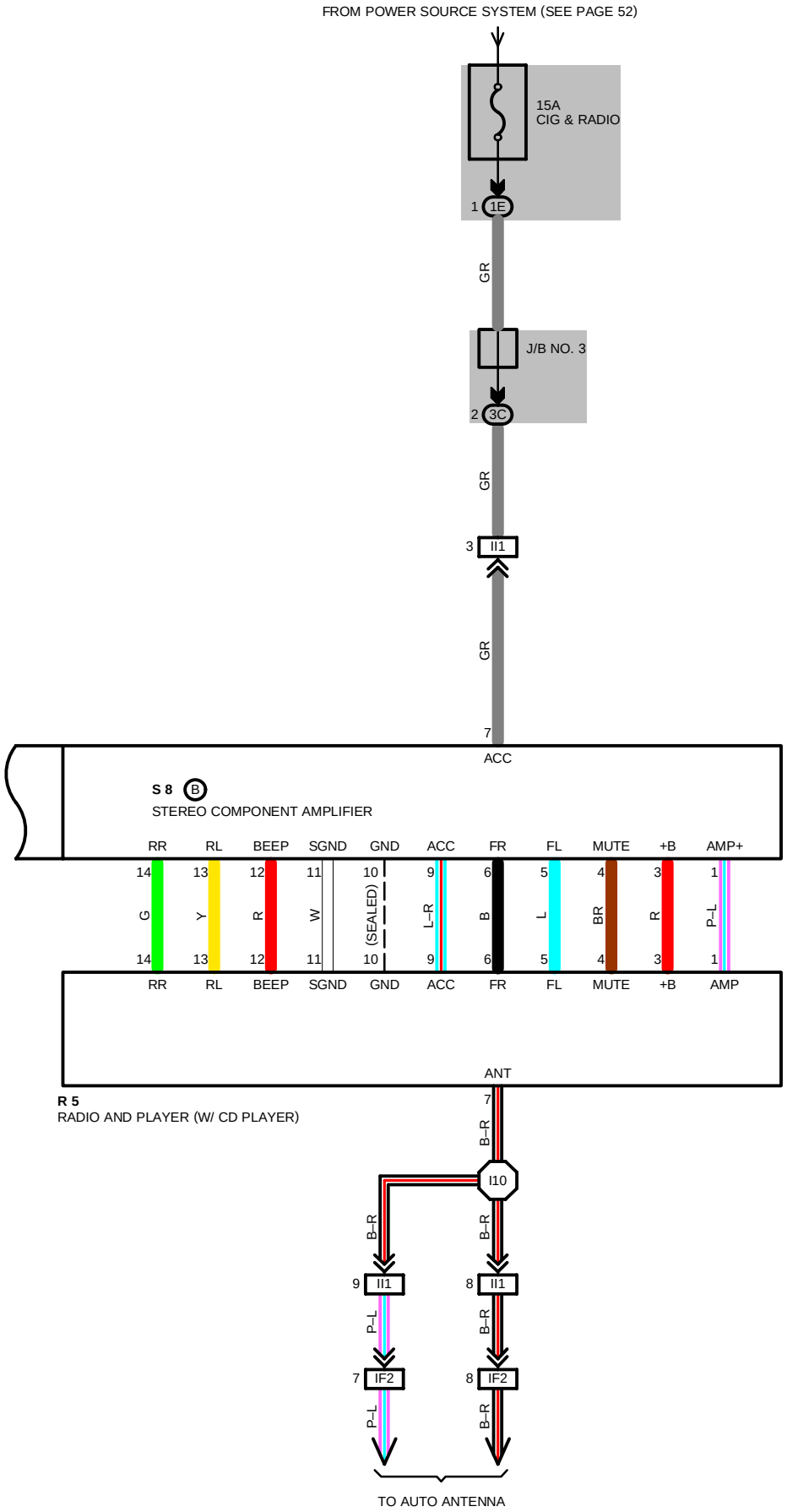
⯃ : SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I10	36	CONSOLE BOX WIRE			



RADIO AND PLAYER (w/ CD PLAYER)




FROM POWER SOURCE SYSTEM (SEE PAGE 52)
15A
CIG & RADIO
1
1E
GR
J/B NO. 3
2
3C
GR
3
I11
GR
7
ACC
S 8
B
STEREO COMPONENT AMPLIFIER
RR
RL
BEEP
SGND
GND
ACC
FR
FL
MUTE
+B
AMP+
14
13
12
11
10
9
6
5
4
3
1
G
Y
R
W
(SEALED)
L–R
B
L
BR
R
P–L
14
13
12
11
10
9
6
5
4
3
1
RR
RL
BEEP
SGND
GND
ACC
FR
FL
MUTE
+B
AMP
ANT
R 5
RADIO AND PLAYER (W/ CD PLAYER)
7
B–R
I10
B–R
B–R
9
I11
8
I11
P–L
B–R
7
IF2
8
IF2
P–L
B–R
TO AUTO ANTENNA

RADIO AND PLAYER (w/ CD PLAYER)

SERVICE HINTS

S 8 (B), S 9 (A) POWER AMPLIFIER
(A) 7, **(A)**16–GROUND : ALWAYS APPROX. **12** VOLTS
(B) 7–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** OR **ACC** POSITION
(A)12, **(A)**13–GROUND : ALWAYS CONTINUITY

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE		SEE PAGE
D16	30 (L/B), 31 (C/P)	**J 1**	29	**R18**		30 (L/B), 31 (C/P)
D17	30 (L/B), 31 (C/P)	**R 5**	29	**R19**		30 (L/B), 31 (C/P)
F12	29	**R14**	30 (L/B), 31 (C/P)	**S 8**	B	29
F13	29	**R15**	30 (L/B), 31 (C/P)	**S 9**	A	29
F14	30 (L/B), 31 (C/P)	**R16**	30 (L/B), 31 (C/P)			
F15	30 (L/B), 31 (C/P)	**R17**	30 (L/B), 31 (C/P)			

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1D	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO.1 (LEFT KICK PANEL)
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO.2 (NEAR THE BATTERY)
3C	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC1	36	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
IC2		
IF2	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
II1	36	COWL WIRE AND CONSOLE BOX WIRE (INSTRUMENT PANEL CENTER)
II2		
II3		
IK1	36	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
IK2		

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IF	36	INSTRUMENT PANEL BRACE RH

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 1	36	COWL WIRE	**I 8**	36	COWL WIRE
I 2			**I 9**		
I 5			**I10**	36	CONSOLE BOX WIRE
I 6					

D16, D17



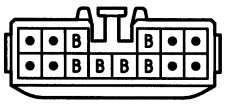
F12, F13



F14, F15

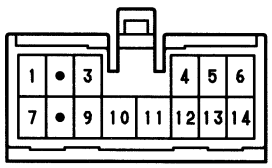


J 1



(HINT:SEE PAGE 7)

R 5



R14 (A), R16 (B)



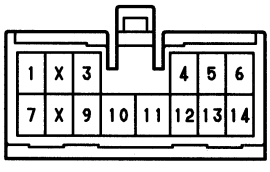
R15 (A), R17 (B)



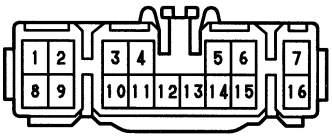
R18, R19



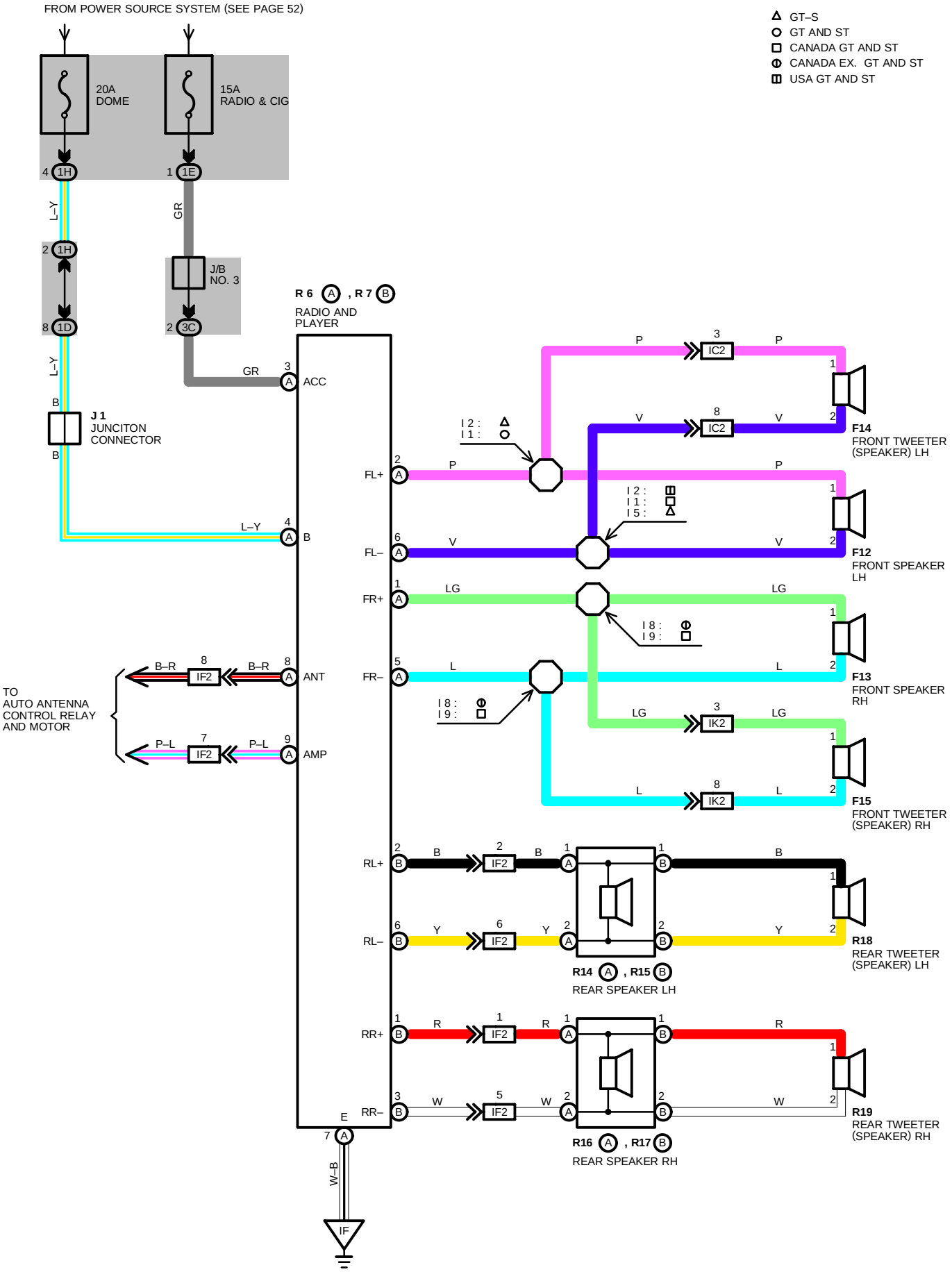
S 8 (B)



S 9 (A)



RADIO AND PLAYER (w/o CD PLAYER)



SERVICE HINTS

R 6(A), R 7(B) RADIO AND PLAYER
(A) 4–GROUND : ALWAYS APPROX. **12** VOLTS
(A) 3–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** OR **ACC** POSITION
(A) 7–GROUND : ALWAYS CONTINUITY

: PARTS LOCATION

CODE	SEE PAGE	CODE		SEE PAGE	CODE		SEE PAGE
F12	29	**R 6**	A	29	**R17**	B	30 (L/B), 31 (C/P)
F13	29	**R 7**	B	29	**R18**		30 (L/B), 31 (C/P)
F14	30 (L/B), 31 (C/P)	**R14**	A	30 (L/B), 31 (C/P)	**R19**		30 (L/B), 31 (C/P)
F15	30 (L/B), 31 (C/P)	**R15**	B	30 (L/B), 31 (C/P)			
J 1	29	**R16**	A	30 (L/B), 31 (C/P)			

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1D	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
3C	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC2	36	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
IF2	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
IK2	36	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
IF	36	INSTRUMENT PANEL BRACE RH

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 1	36	COWL WIRE	**I 8**	36	COWL WIRE
I 2			**I 9**		
I 5					

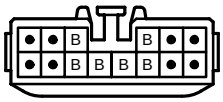
F12, F13



F14, F15

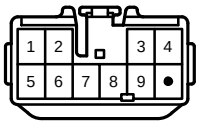


J 1

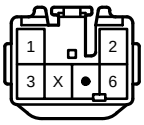


(HINT : SEE PAGE 7)

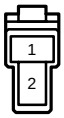
R 6 (A)



R 7 (B)



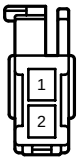
R14 (A), R16 (A)



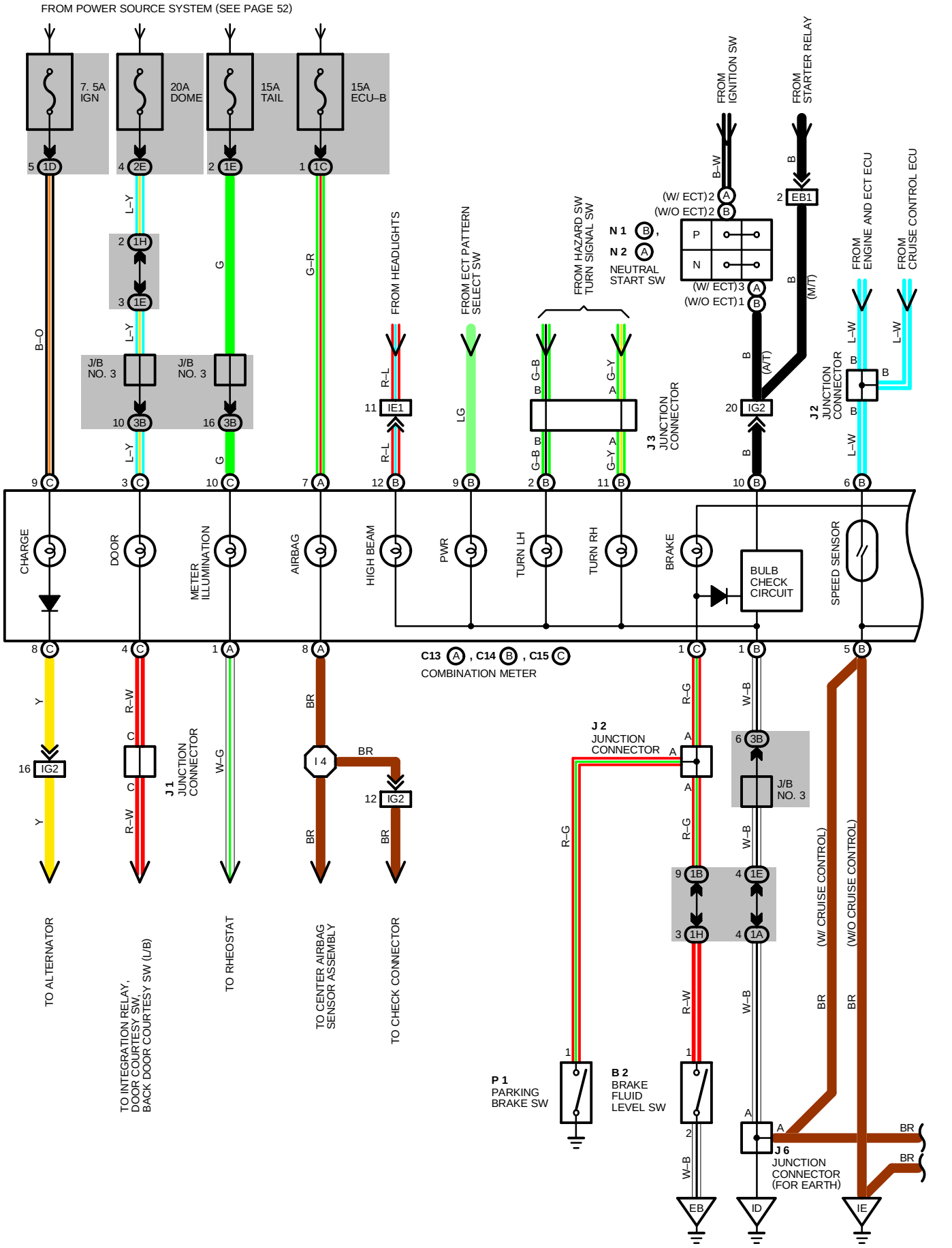
R15 (B), R17 (B)

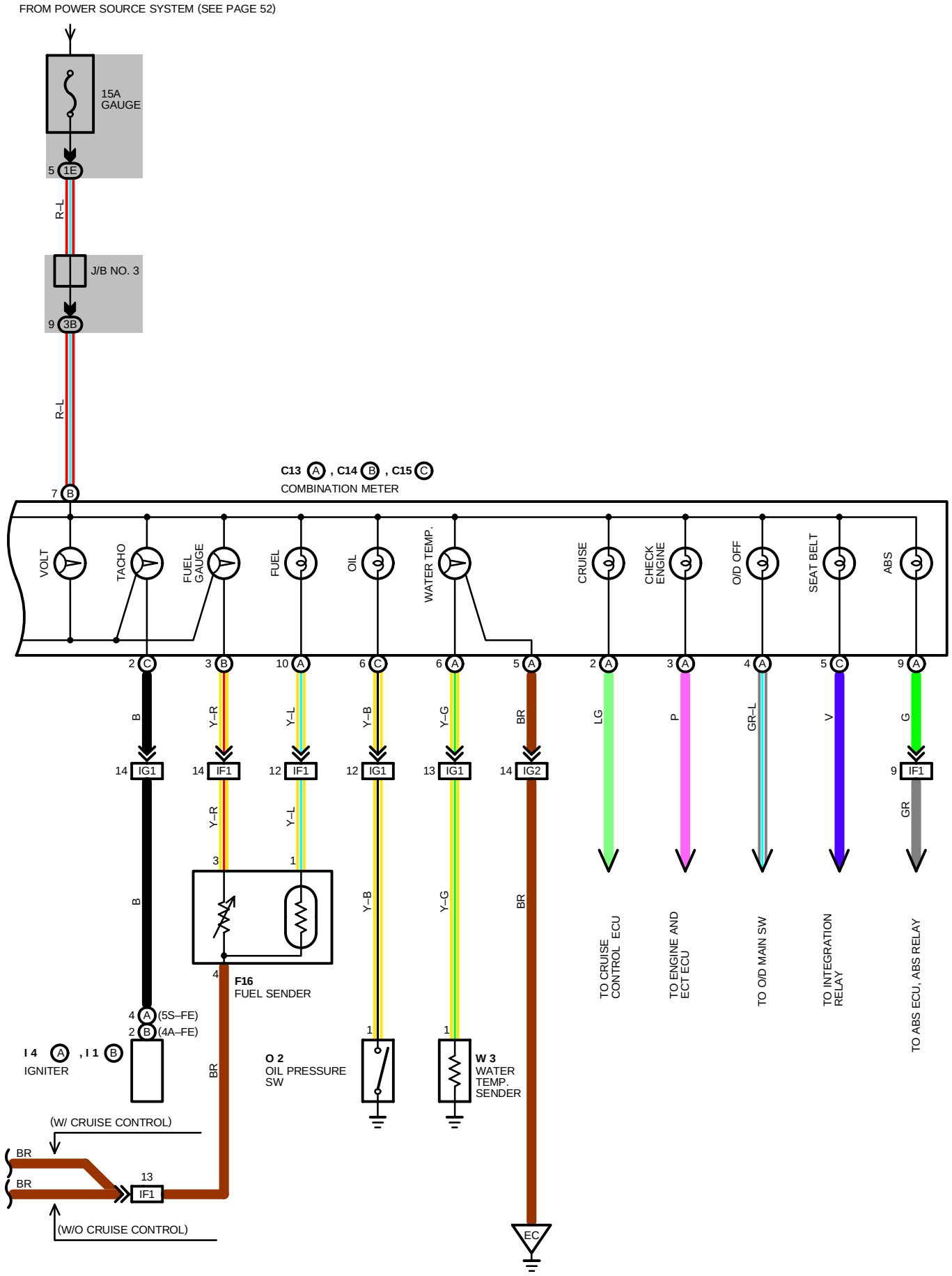


R18, R19



COMBINATION METER




FROM POWER SOURCE SYSTEM (SEE PAGE 52)
15A
GAUGE
5 1E
R–L
J/B NO. 3
9 3B
R–L
7 B
C13 A , C14 B , C15 C
COMBINATION METER
VOLT
TACHO
FUEL GAUGE
FUEL
OIL
WATER TEMP.
CRUISE
CHECK ENGINE
O/D OFF
SEAT BELT
ABS
2 C
3 B
10 A
6 C
6 A
5 A
2 A
3 A
4 A
5 C
9 A
B
Y–R
Y–L
Y–B
Y–G
BR
LG
P
GR–L
V
G
14 IG1
14 IF1
12 IF1
12 IG1
13 IG1
14 IG2
9 IF1
GR
3
1
4
F16
FUEL SENDER
4 A (5S–FE)
2 B (4A–FE)
I 4 A , I 1 B
IGNITER
O 2
OIL PRESSURE SW
W 3
WATER TEMP. SENDER
(W/ CRUISE CONTROL)
BR
BR
13
IF1
(W/O CRUISE CONTROL)
EC
TO CRUISE CONTROL ECU
TO ENGINE AND ECT ECU
TO O/D MAIN SW
TO INTEGRATION RELAY
TO ABS ECU, ABS RELAY

COMBINATION METER

SERVICE HINTS

B 2 BRAKE FLUID LEVEL SW

1–2 : CLOSED WITH FLOAT DOWN

C13(A), C14(B), C15(C) COMBINATION METER

(A) 7, **(C)** 3–GROUND : ALWAYS APPROX. **12** VOLTS

(B) 7, **(C)** 9–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION

(A) 5, **(B)** 1, **(B)** 5–GROUND : ALWAYS CONTINUITY

F16 FUEL SENDER

3–4 : APPROX. **3** Ω WITH FUEL FULL
APPROX. **110.0** Ω WITH FUEL EMPTY

O 2 OIL PRESSURE SW

1–GROUND : CLOSED WITH OIL PRESSURE BELOW **0.2** KG/CM^2 (**2.84** SPI, **19.61** KPA)

P 1 PARKING BRAKE SW

1–GROUND : CLOSED WITH PARKING BRAKE LEVER PULLED UP

W 3 WATER TEMP. SENDER

1–GROUND : APPROX. **226** Ω AT **50**°C (**122**°F)
APPROX. **26.4** Ω AT **115**°C (**239**°F)

: PARTS LOCATION

CODE		SEE PAGE	CODE		SEE PAGE	CODE		SEE PAGE
B 2		26 (5S–FE), 27 (4A–FE)	**I 4**	A	26 (5S–FE)	**N 2**	A	26 (5S–FE)
C13	A	28	**J 1**		29	**O 2**		26 (5S–FE), 27 (4A–FE)
C14	B	28	**J 2**		29	**P 1**		29
C15	C	28	**J 3**		29	**W 3**		26 (5S–FE), 27 (4A–FE)
F16		30 (L/B), 31 (C/P)	**J 6**		29			
I 1	B	27 (4A–FE)	**N 1**	B	26 (5S–FE), 27 (4A–FE)			

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1B		
1C		
1D		
1E		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2E	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
3B	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EB1	32 (5S–FE) 34 (4A–FE)	ENGINE WIRE AND COWL WIRE (REAR SIDE OF RIGHT FRONT FENDER)
IE1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
IG1	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)
IG2		

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EB	32 (5S–FE) 34 (4A–FE)	FRONT LEFT FENDER
EC	32 (5S–FE) 34 (4A–FE)	INTAKE MANIFOLD
ID	36	LEFT KICK PANEL
IE	36	INSTRUMENT PANEL BRACE LH

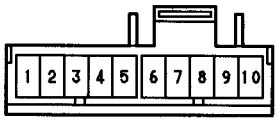
: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
I 4	36	COWL WIRE			

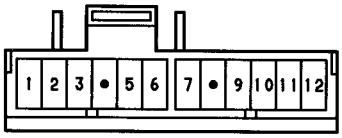
B 2 GRAY



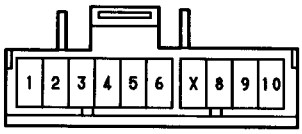
C13 (A) BROWN



C14 (B)



C15 (C) GRAY



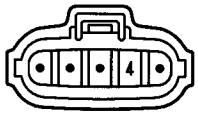
F16 DARK GRAY



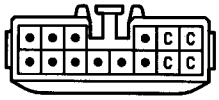
(4A-FE) I 1 (B) DARK GRAY



(5S-FE) I 4 (A) BLACK

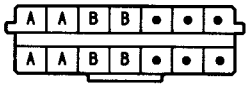


J 1



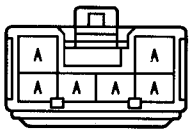
(HINT:SEE PAGE 7)

J 2, J 3



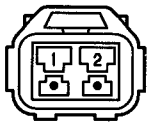
(HINT:SEE PAGE 7)

J 6



(HINT:SEE PAGE 7)

N 1 (B) GRAY



N 2 (A) GRAY



O 2 BLACK

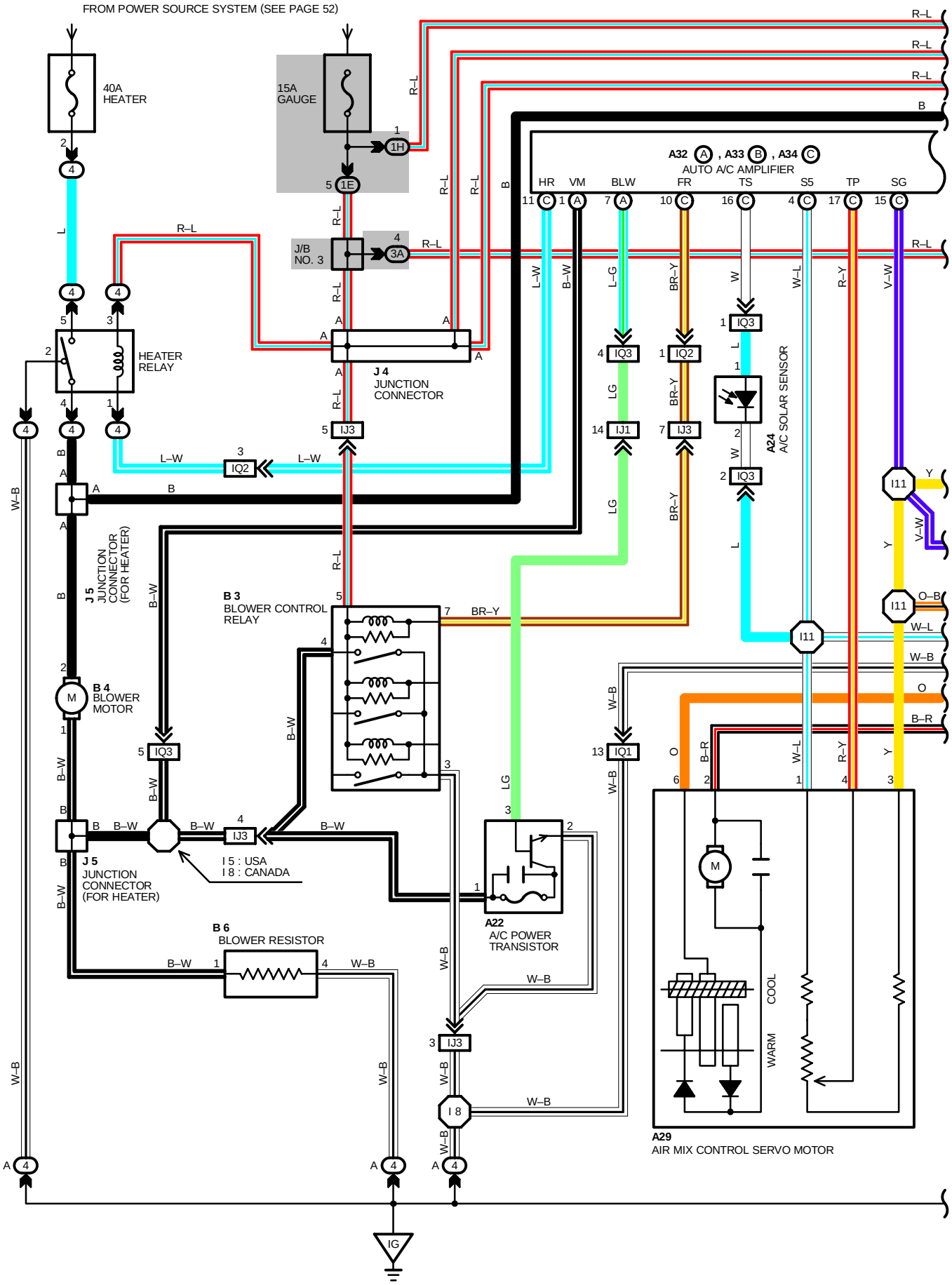


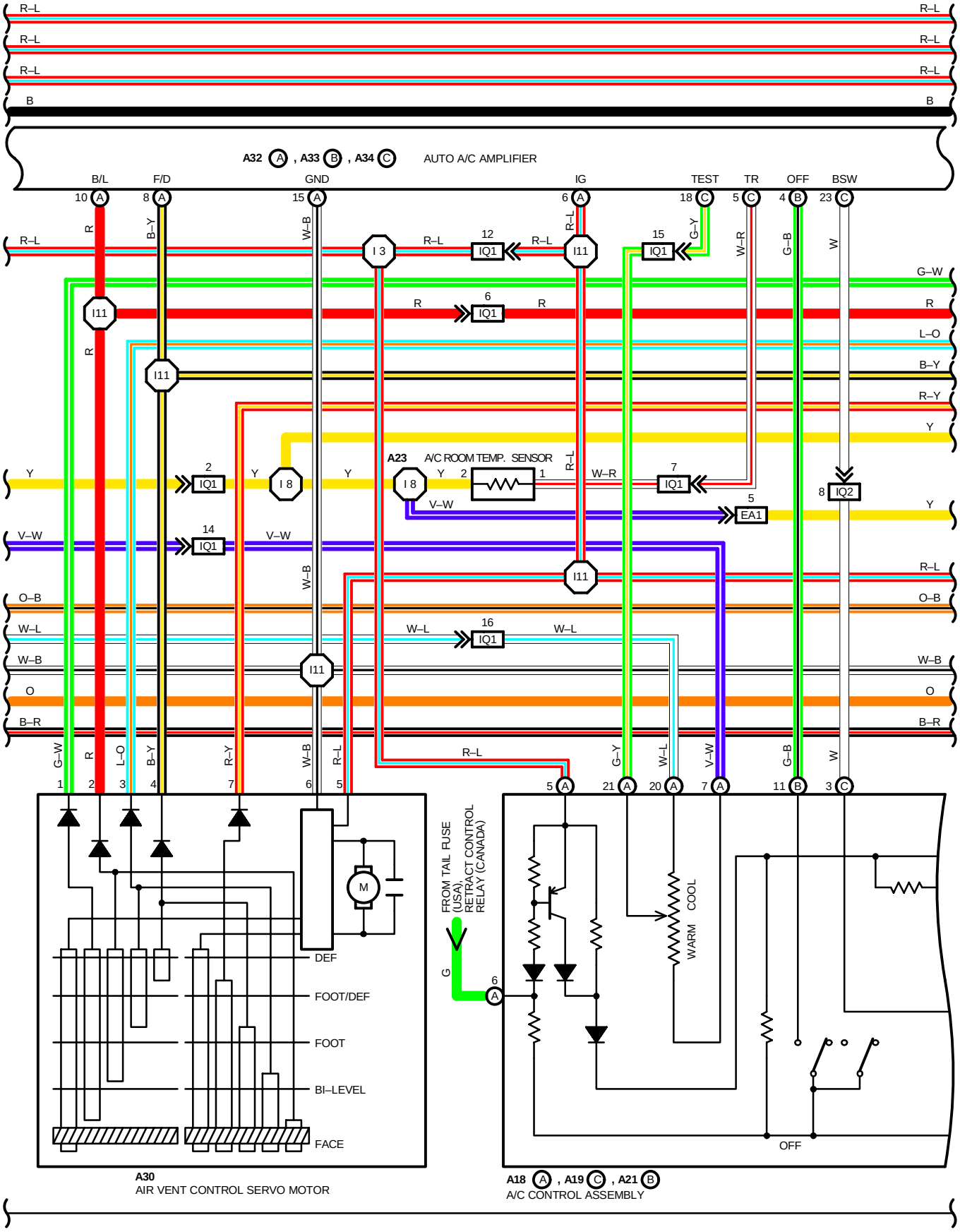
P 1 BLACK

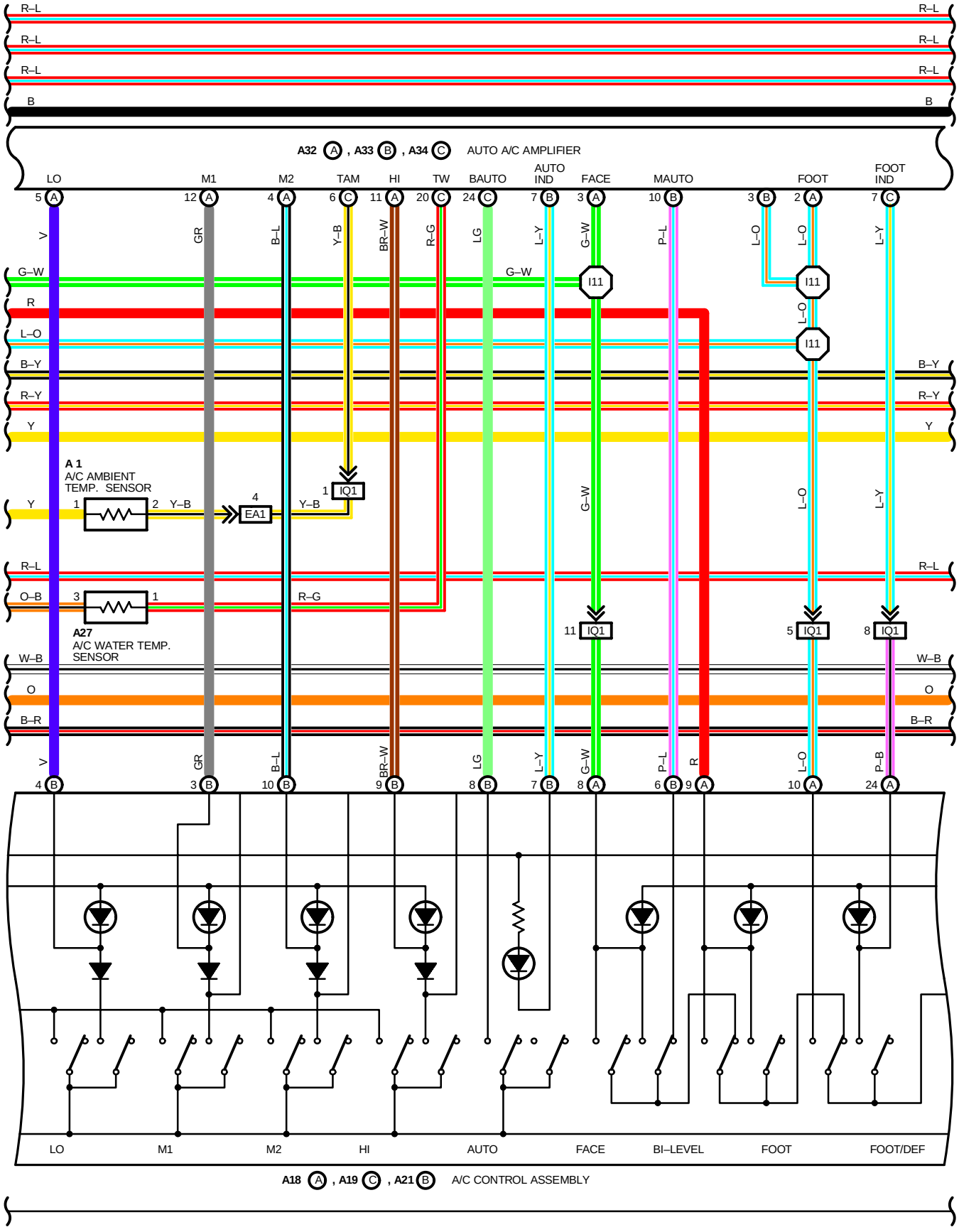


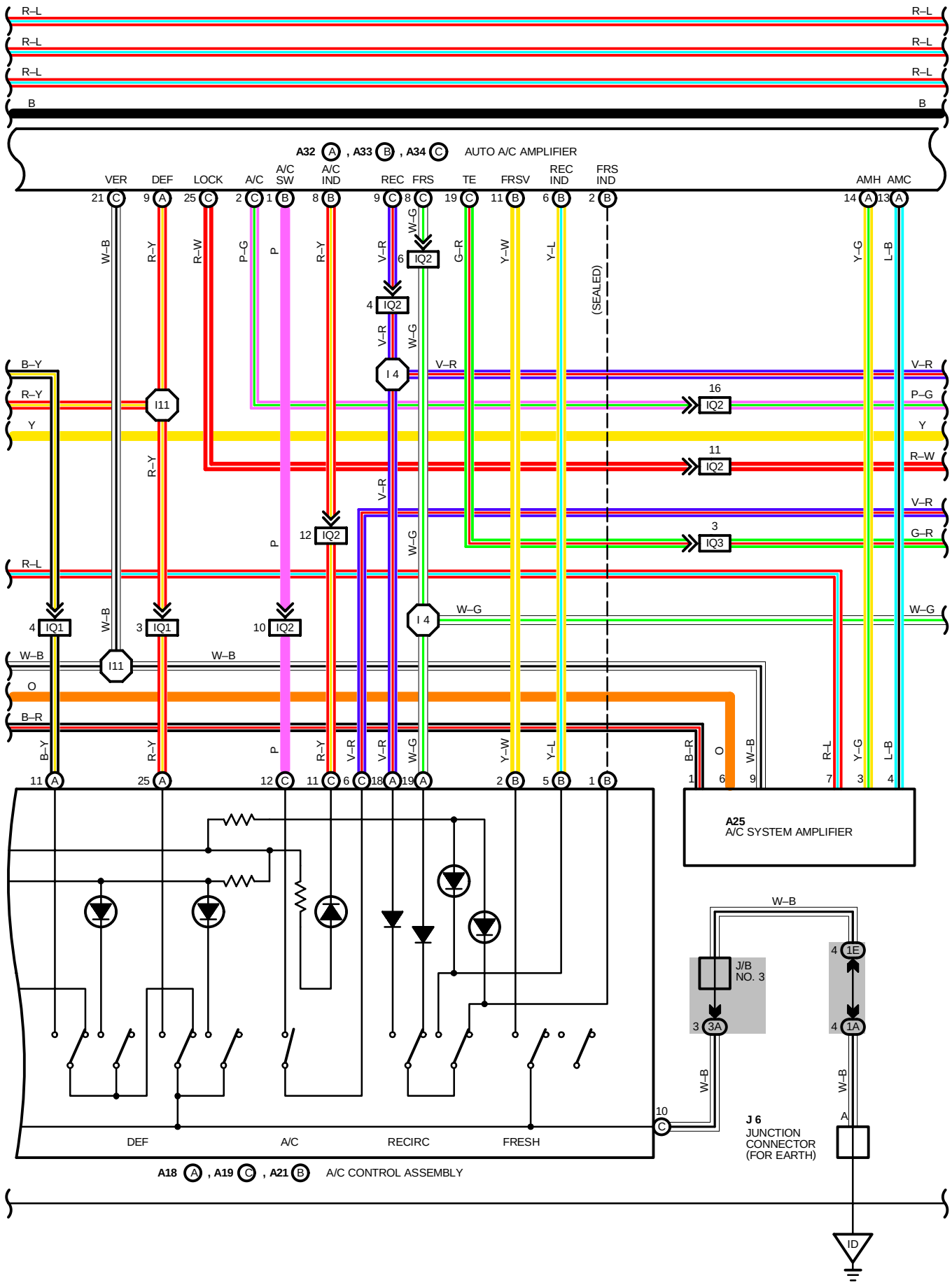
W 3 GRAY

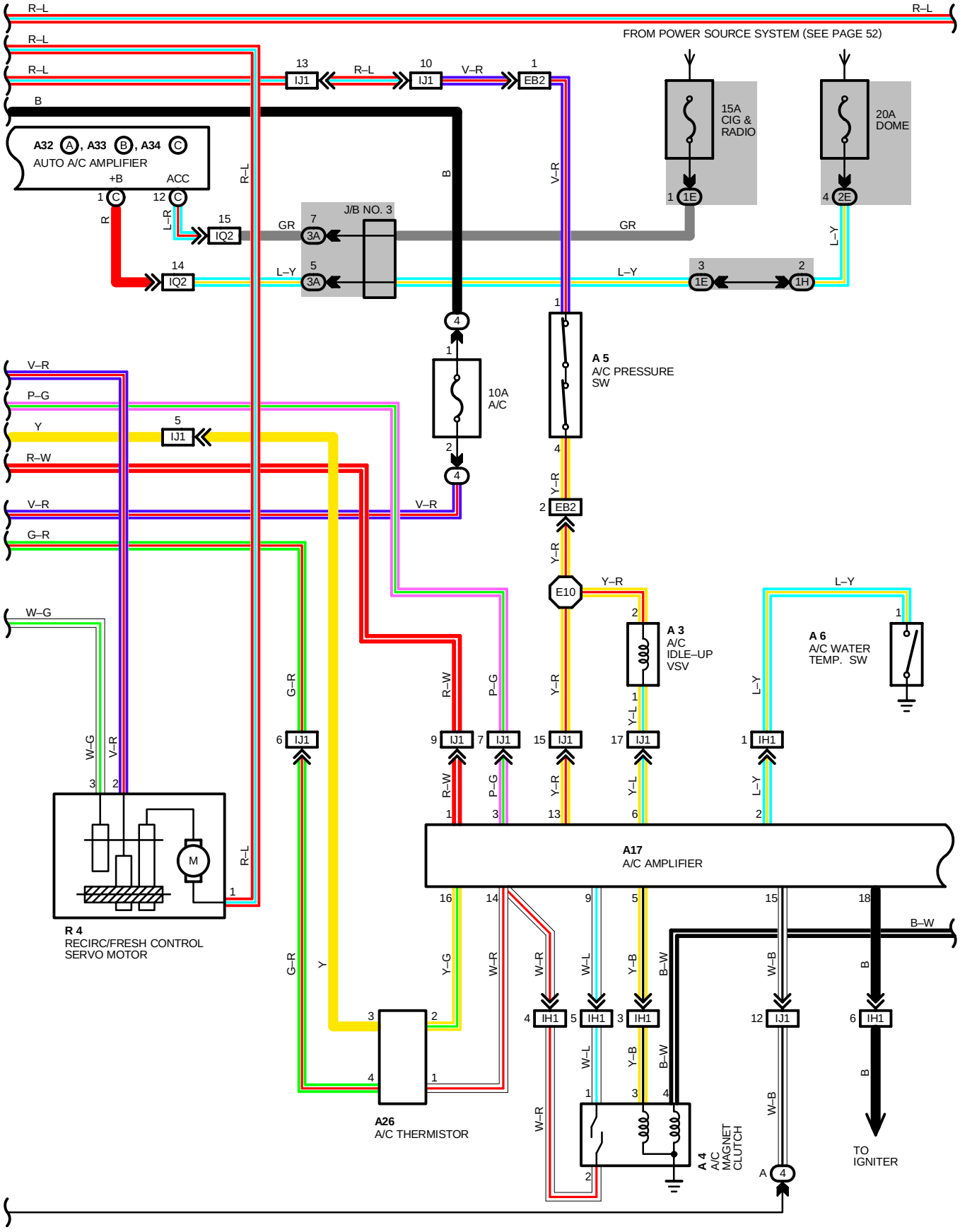


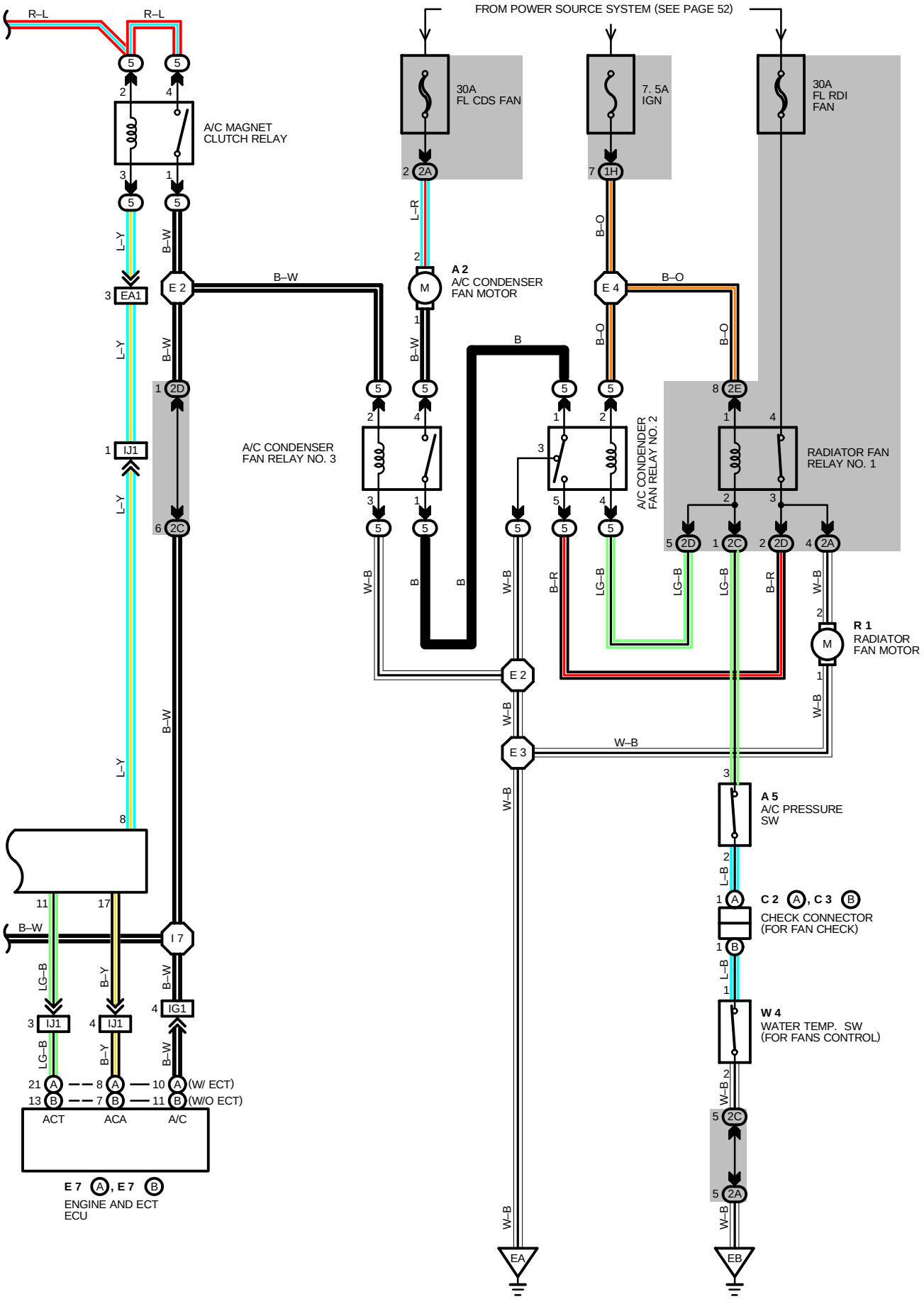

FROM POWER SOURCE SYSTEM (SEE PAGE 52)
40A HEATER
15A GAUGE
J/B NO. 3
HEATER RELAY
J 4 JUNCTION CONNECTOR
J 5 JUNCTION CONNECTOR (FOR HEATER)
B 3 BLOWER CONTROL RELAY
B 4 BLOWER MOTOR
B 6 BLOWER RESISTOR
J 5 JUNCTION CONNECTOR (FOR HEATER)
I 5 : USA
I 8 : CANADA
A22 A/C POWER TRANSISTOR
A32 , A33 , A34
AUTO A/C AMPLIFIER
HR VM BLW FR TS S5 TP SG
A24 A/C SOLAR SENSOR
A29 AIR MIX CONTROL SERVO MOTOR
COOL
WARM
IG


R–L
B
A32 A , A33 B , A34 C
AUTO A/C AMPLIFIER
B/L
F/D
GND
IG
TEST
TR
OFF
BSW
A23
A/C ROOM TEMP. SENSOR
FROM TAIL FUSE (USA), RETRACT CONTROL RELAY (CANADA)
WARM
COOL
DEF
FOOT/DEF
FOOT
BI–LEVEL
FACE
M
A30
AIR VENT CONTROL SERVO MOTOR
A18 A , A19 C , A21 B
A/C CONTROL ASSEMBLY


R–L
B
A32 (A) , A33 (B) , A34 (C) AUTO A/C AMPLIFIER
LO
M1
M2
TAM
HI
TW
BAUTO
AUTO IND
FACE
MAUTO
FOOT
FOOT IND
A 1
A/C AMBIENT TEMP. SENSOR
IQ1
EA1
I11
A27
A/C WATER TEMP. SENSOR
LO
M1
M2
HI
AUTO
FACE
BI–LEVEL
FOOT
FOOT/DEF
A18 (A) , A19 (C) , A21 (B) A/C CONTROL ASSEMBLY


R–L
B
A32 A , A33 B , A34 C AUTO A/C AMPLIFIER
VER DEF LOCK A/C A/C SW A/C IND REC FRS TE FRSV REC IND FRS IND AMH AMC
(SEALED)
I11
I 4
IQ1
IQ2
IQ3
A25
A/C SYSTEM AMPLIFIER
J/B NO. 3
J 6
JUNCTION CONNECTOR (FOR EARTH)
DEF
A/C
RECIRC
FRESH
A18 A , A19 C , A21 B A/C CONTROL ASSEMBLY


FROM POWER SOURCE SYSTEM (SEE PAGE 52)
A32 A, A33 B, A34 C
AUTO A/C AMPLIFIER
+B
ACC
15A CIG & RADIO
20A DOME
J/B NO. 3
10A A/C
A 5
A/C PRESSURE SW
A 3
A/C IDLE–UP VSV
A 6
A/C WATER TEMP. SW
A17
A/C AMPLIFIER
R 4
RECIRC/FRESH CONTROL SERVO MOTOR
A26
A/C THERMISTOR
A 4
A/C MAGNET CLUTCH
TO IGNITER


FROM POWER SOURCE SYSTEM (SEE PAGE 52)
30A
FL CDS FAN
7. 5A
IGN
30A
FL RDI
FAN
A/C MAGNET
CLUTCH RELAY
A 2
A/C CONDENSER
FAN MOTOR
A/C CONDENSER
FAN RELAY NO. 3
A/C CONDENDER
FAN RELAY NO. 2
RADIATOR FAN
RELAY NO. 1
R 1
RADIATOR
FAN MOTOR
A 5
A/C PRESSURE
SW
C 2 A, C 3 B
CHECK CONNECTOR
(FOR FAN CHECK)
W 4
WATER TEMP. SW
(FOR FANS CONTROL)
E 7 A, E 7 B
ENGINE AND ECT
ECU
ACT
ACA
A/C
(W/ ECT)
(W/O ECT)
EA
EB
R–L
B–W
L–Y
L–R
B–O
B
W–B
LG–B
B–Y
B–R
L–B

SYSTEM OUTLINE

1. COOLING FAN OPERATION

WHEN THE IGNITION SW IS TURNED ON, THE CURRENT FROM IGN FUSE FLOWS TO **TERMINAL 3** OF RADIATOR FAN RELAY NO. 1 → **TERMINAL 4** → **TERMINAL 3** OF THE A/C PRESSURE SW → **TERMINAL 2** → **TERMINAL 1** OF WATER TEMP. SW (FOR FANS CONTROL) → **TERMINAL 2** (5S–FE) → **GROUND,** FROM **TERMINAL 2** OF A/C FAN RELAY NO. 2 → **TERMINAL 4** → **TERMINAL 3** OF A/C PRESSURE SW → **TERMINAL 2** → **TERMINAL 1** OF WATER TEMP. SW (FOR FANS CONTROL) → **TERMINAL 2** (5S–FE) → **GROUND,** CAUSING RELAY NO. 1 AND RELAY NO. 2 OF EACH FAN TO TURN ON.

***** OPERATION AT LOW SPEED

WHEN THE A/C SW (A/C CONTROL ASSEMBLY) IS TURNED ON AND THE AIR CONDITIONER OPERATES, THE CURRENT FLOWS FROM GAUGE FUSE FLOWS TO **TERMINAL 2** OF A/C MAGNET CLUTCH RELAY → **TERMINAL 3** → **TERMINAL 8** OF A/C AMPLIFIER CAUSING A/C MAGNET CLUTCH RELAY TO TURN ON.

AT THAT TIME, THE CURRENT FROM GAUGE FUSE FLOWS TO **TERMINAL 4** OF A/C MAGNET CLUTCH RELAY → **TERMINAL 1** → **TERMINAL 4** OF A/C MAGNET CLUTCH → **GROUND,** AND FROM **TERMINAL 1** OF A/C MAGNET CLUTCH RELAY → **TERMINAL 2** OF A/C FAN RELAY NO. 3 → **TERMINAL 3** → **GROUND**.

AS A RESULT, A/C MAGNET CLUTCH AND A/C FAN RELAY NO. 3 TURN ON AND THE CURRENT FLOWS FROM FL CDS FAN → **TERMINAL 2** OF A/C CONDENSER FAN MOTOR → **TERMINAL 1** → **TERMINAL 4** OF A/C FAN RELAY NO. 3 → **TERMINAL 1** → **TERMINAL 1** OF A/C FAN RELAY NO. 2 → **TERMINAL 5** → **TERMINAL 2** OF A/C CONDENSER FAN MOTOR → **TERMINAL 1** → **GROUND**, FLOWING TO EACH FAN MOTOR IN SERIES, CAUSING THE COOLING FAN TO ROTATE AT LOW SPEED.

***** OPERATION AT HIGH SPEED

DURING A/C OPERATION, WHEN THE PRESSURE OF A/C COMPRESSOR BECOMES HIGHER THAN NORMAL PRESSURE (MORE THAN **14.3** KG/CM^2 **1401** KPA, **203** PSI), THE A/C PRESSURE SW TURNS OFF.

AS A RESULT, FAN RELAY NO. 1 AND NO. 2 TURNS OFF AND THE CURRENT FLOWS FROM FL RDI FAN → **TERMINAL 1** OF RADIATOR FAN RELAY NO. 1 → **TERMINAL 2** → **TERMINAL 2** OF RADIATOR FAN MOTOR → **TERMINAL 1** → **GROUND,** AND FROM FL CDS FAN → **TERMINAL 2** OF A/C CONDENSER FAN MOTOR → **TERMINAL 1** → **TERMINAL 4** OF A/C FAN RELAY NO. 3 → **TERMINAL 1** → **TERMINAL 1** OF A/C FAN RELAY NO. 2 → **TERMINAL 3** → **GROUND**, FLOWING TO EACH FAN MOTOR IN PARALLEL CAUSING THE COOLING FAN TO ROTATE AT HIGH SPEED. WHEN THE ENGINE COOLANT TEMPERATURE BECOMES MORE THAN ABOUT **90˚ C** (**194˚F),** THE WATER TEMP. SW TURNS OFF AND THE SAME OPERATION AS ABOVE IS PERFORMED.

2. HEATER BLOWER MOTOR OPERATION (PUSH TYPE BLOWER CONTROL SW (W/ AUTO A/C))

CURRENT IS APPLIED AT ALL TIMES THROUGH THE HEATER FUSE TO **TERMINAL 5** OF HEATER RELAY. WHEN THE IGNITION SW IS TURNED ON, CURRENT FLOWS THROUGH GAUGE FUSE TO **TERMINAL 3** OF HEATER RELAY → **TERMINAL 1** → **TERMINAL HR** OF A/C AUTO AMPLIFIER. AT THE SAME TIME, CURRENT ALSO FLOWS FROM GAUGE FUSE TO **TERMINAL 5** OF A/C BLOWER CONTROL RELAY → **TERMINAL 7** → **TERMINAL FR** OF A/C AUTO AMPLIFIER.

***** LOW SPEED OPERATION (OPERATION AT MANUAL)

WHEN THE BLOWER SW (A/C CONTROL ASSEMBLY) IS MOVED TO **LOW** POSITION, SIGNALS ARE INPUT FROM **TERMINAL C 3** OF THE A/C CONTROL ASSEMBLY, **TERMINAL BSW** OF THE A/C AUTO AMPLIFIER AND **TERMINAL B 4** OF THE A/C AUTO AMPLIFIER AND **TERMINAL B 4** OF THE A/C CONTROL ASSEMBLY TO **TERMINAL 10** OF THE A/C AUTO AMPLIFIER, CAUSING THE A/C AUTO AMPLIFIER TO OPERATE.

CURRENT FLOWING TO **TERMINAL HR** OF A/C AUTO AMPLIFIER FLOWS TO **TERMINAL GND** OF A/C AUTO AMPLIFIER → **GROUND** AND TURNS THE HEATER RELAY ON.

THIS CAUSES THE CURRENT TO **TERMINAL 5** OF THE HEATER RELAY TO FLOW TO **TERMINAL 4** OF HEATER RELAY → **TERMINAL 2** OF BLOWER MOTOR → MOTOR → **TERMINAL 1** → **TERMINAL 1** OF BLOWER RESISTOR → **TERMINAL 4** → **GROUND**. CAUSING THE BLOWER MOTOR TO ROTATE AT LOW SPEED.

***** HIGH SPEED OPERATION (OPERATION AT MANUAL)

WHEN THE BLOWER SW (A/C CONTROL ASSEMBLY) IS MOVED TO **HI** POSITION, SIGNALS ARE INPUT FROM **TERMINAL C 3** OF A/C CONTROL ASSEMBLY, **TERMINAL BSW** OF A/C AUTO AMPLIFIER AND **TERMINAL B 9** OF A/C CONTROL ASSEMBLY TO **TERMINAL HI** OF A/C AUTO AMPLIFIER, CAUSING THE A/C AUTO AMPLIFIER TO OPERATE.

CURRENT TO **TERMINAL HR** OF THE AUTO AMPLIFIER THEN FLOWS TO **TERMINAL GND** OF A/C AUTO AMPLIFIER → **GROUND**, TURNING THE HEATER RELAY ON.

AT THE SAME TIME, CURRENT FLOWING TO **TERMINAL 5** OF THE A/C RELAY BOX FLOWS TO→ **TERMINAL 7** OF A/C RELAY BOX → **TERMINAL FR** OF A/C AUTO AMPLIFIER → **TERMINAL GND** → **GROUND,** CAUSING THE BLOWER MOTOR TO ROTATE AT HIGH SPEED.

***** MEDIUM SPEED OPERATION (OPERATION AT MANUAL M1, M2)

WHEN THE BLOWER SW (A/C CONTROL ASSEMBLY) IS MOVED TO **M1** POSITION, A SIGNAL IS INPUT FROM **TERMINAL B3** OF A/C CONTROL ASSEMBLY TO **TERMINAL M1** OF A/C AUTO AMPLIFIER.
THIS CAUSES TO CURRENT FLOWING TO **TERMINAL HR** OF THE A/C AUTO AMPLIFIER TO FLOW TO **TERMINAL GND** OF A/C AUTO AMPLIFIER → **GROUND** AND TURNS THE HEATER RELAY ON. SIMULTANEOUSLY, CURRENT FLOWING FROM **TERMINAL BLW** OF A/C AUTO AMPLIFIER TO **TERMINAL 3** OF A/C POWER TRANSISTOR → **TERMINAL 2** → **GROUND** CAUSES CURRENT FLOWING TO THE BLOWER MOTOR TO FLOW TO **TERMINAL 5** OF HEATER RELAY → **TERMINAL 4** → **TERMINAL 2** OF BLOWER MOTOR → **TERMINAL 1** → **TERMINAL 1** OF POWER TRANSISTOR → **TERMINAL 2** → **GROUND,** CAUSING TO BLOWER MOTOR ROTATE AT MEDIUM LOW SPEED.
IF THE BLOWER SW (A/C CONTROL ASSEMBLY) IS MOVED TO **M2** POSITION, THE CURRENT FLOW FROM **TERMINAL BLW** OF THE A/C AUTO AMPLIFIER TO **TERMINAL 1** OF THE POWER TRANSISTOR BECOMES GREATER THAN FOR M1 AND CURRENT FLOWS MORE EASILY BETWEEN **TERMINAL 1** AND **TERMINAL 2** OF THE POWER TRANSISTOR, SO THE BLOWER MOTOR ROTATES AT MEDIUM HIGH SPEED.

***** AUTO FUNCTION

WHEN THE AUTO SW (A/C CONTROL ASSEMBLY) IS SELECTED, THE CURRENT FLOW IS THE SAME FOR **MED** POSITION, BUT THE A/C AUTO AMPLIFIER DECIDES THE APPROPRIATE AIR FLOW VOLUME ACCORDING TO THE SET TEMPERATURE AND TO INPUT SIGNALS FROM EACH SENSOR. BY CONTROLLING THE CURRENT FLOW FROM **TERMINAL BLW** OF THE A/C AUTO AMPLIFIER TO **TERMINAL 3** OF POWER TRANSISTOR → **TERMINAL 2** → **GROUND,** THE A/C AUTO AMPLIFIER CONTROLS THE BLOWER MOTOR STEPLESSLY.

3. OPERATION OF RECIRC/FRESH CONTROL SERVO MOTOR

(SWITCHING FROM FRESH TO RECIRC)

WITH IGNITION SW TURNED ON. THE CURRENT FLOWS FROM GAUGE FUSE TO **TERMINAL 1** OF RECIRC/FRESH CONTROL SERVO MOTOR. WHEN THE RECIRC/FRESH SW IS SWITCHED TO THE RECIRC SIDE, TO CURRENT FLOWS FROM **TERMINAL 1** OF RECIRC/FRESH CONTROL SERVO MOTOR → **TERMINAL 2** → **TERMINAL A18** OF A/C CONTROL ASSEMBLY → **TERMINAL B 5** → **TERMINAL REC IND** OF A/C AUTO AMPLIFIER → **TERMINAL GND** → **GROUND,** THE MOTOR ROTATES AND THE DAMPER MOVES TO THE RECIRC SIDE. WHEN IT IS IN THE **RECIRC** POSITION, THE CURRENT IS CUT INSIDE THE SERVO MOTOR AND THE DAMPER STOPS AT THAT POSITION.

(SWITCHING FROM RECIRC TO FRESH)

WITH IGNITION SW ON, WHEN THE RECIRC/FRESH SW IS SWITCHED TO THE FRESH SIDE, THE CURRENT FLOWS FROM **TERMINAL 1** OF RECIRC/FRESH CONTROL SERVO MOTOR → **TERMINAL 3** → **TERMINAL A19** OF A/C CONTROL ASSEMBLY → **TERMINAL B 1** → **TERMINAL FRS IND** OF A/C AUTO AMPLIFIER → **TERMINAL GND** → **GROUND,** THE MOTOR ROTATES AND THE DAMPER MOVES TO THE FRESH SIDE. WHEN IT IS IN THE **FRESH** POSITION, THE CURRENT IS CUT INSIDE THE SERVO MOTOR AND THE DAMPER STOPS AT THAT POSITION.

4. OPERATION OF AIR VENT MODE CONTROL SERVO MOTOR

WITH IGNITION SW TURNED ON, THE CURRENT FLOWS FROM GAUGE FUSE TO **TERMINAL 5** OF AIR VENT MODE CONTROL SERVO MOTOR → **TERMINAL 6** → **GROUND,** AND THE DAMPER MOVES TO THE POSITION OF THE MODE SELECTION SW OF THE CONTROL ASSEMBLY SWITCH IS ON.
WHEN THE MODE SELECTION SW OF A/C CONTROL ASSEMBLY IS MOVED TO **DEF** POSITION FROM THE DAMPER IN THE **FACE** POSITION, THE CURRENT FLOWS FROM **TERMINAL 7** OF AIR VENT MODE CONTROL SERVO MOTOR TO **TERMINAL A 25** OF A/C CONTROL ASSEMBLY → **TERMINAL C10** → **GROUND.**

AS A RESULT, THE SERVO MOTOR OPERATES UNTIL THE DAMPER REACHES **DEF** POSITION.
WHEN THIS OCCURS THE CURRENT TO THE A/C CONTROL ASSEMBLY IS SHUT OFF AND ROTATION OF THE MOTOR STOPS.
SWITCHING TO OTHER MODES IS CONTROLLED BY THE SERVO MOTOR ACCORDING THE FLOWING CURRENT:

1. **FOOT/DEF** POSITION: THE CURRENT FLOWS FROM **TERMINAL 4** OF SERVO MOTOR TO **TERMINAL A 11** OF A/C CONTROL ASSEMBLY.
2. **FOOT** POSITION: THE CURRENT FLOWS FROM **TERMINAL 3** OF SERVO MOTOR TO **TERMINAL A 10** OF A/C CONTROL ASSEMBLY.
3. **BI–LEVEL** POSITION: THE CURRENT FLOWS FROM **TERMINAL 2** OF SERVO MOTOR TO **TERMINAL A 9** OF A/C CONTROL ASSEMBLY.

5. OPERATION OF AIR MIX CONTROL SERVO MOTOR

WHEN THE TEMPERATURE CONTROL VOLUME IS TURNED TO THE COOL SIDE, A SIGNAL IS INPUT TO **TERMINAL TEST** OF A/C AUTO AMPLIFIER FROM **TERMINAL A21** OF A/C CONTROL ASSEMBLY.

AS A RESULT, A SIGNAL IS OUTPUT FROM **TERMINAL AMH** OF A/C AUTO AMPLIFIER TO **TERMINAL 3** OF A/C SYSTEM AMPLIFIER AND THE CURRENT FLOWING TO **TERMINAL 7** OF A/C SYSTEM AMPLIFIER FROM THE GAUGE FUSE FLOWS FROM **TERMINAL 1** OF A/C SYSTEM AMPLIFIER → **TERMINAL 2** OF AIR MIX CONTROL SERVO MOTOR → **TERMINAL 6** → IF A/C SYSTEM AMPLIFIER → **TERMINAL 9** → **GROUND**. CAUSING THE AIR MIX CONTROL SERVO MOTOR TO ROTATE.
AT THIS TIME IS INPUT THE DAMPER OPENING ANGLE FROM **TERMINAL 4** OF SERVO MOTOR TO **TERMINAL TP** OF A/C AUTO AMPLIFIER THIS IS USED TO DETERMINE THE DAMPER **STOP** POSITION AND MAINTAIN THE SET TEMPERATURE.
WHEN THE TEMPERATURE CONTROL VOLUME IS TURNED TO THE WARM SIDE, IN A/C SYSTEM AMPLIFIER THE CURRENT FLOWS FROM SERVO MOTOR → **TERMINAL 6** OF A/C SYSTEM AMPLIFIER → **TERMINAL 6** OF AIR MIX CONTROL SERVO MOTOR → MOTOR → **TERMINAL 2** → **TERMINAL 1** OF A/C SYSTEM AMPLIFIER → **TERMINAL 9** → **GROUND**, ROTATING THE MOTOR IN REVERSE AND SWITCHING THE DAMPER FROM COOL TO WARM SIDE.

SYSTEM OUTLINE

6. AIR CONDITIONER OPERATION

THE A/C AMPLIFIER RECEIVES VARIOUS SIGNALS, THE ENGINE RPM SIGNAL FROM THE IGNITER, OUTLET TEMPERATURE SIGNAL FROM THE A/C THERMISTER, COOLANT TEMPERATURE FROM THE WATER TEMP. SENSOR, AND THE LOCK SIGNAL FROM THE A/C COMPRESSOR, ETC.

WHEN THE ENGINE IS STARTED AND THE A/C SW (A/C CONTROL ASSEMBLY) IS TURNED ON, A SIGNAL IS INPUT TO **TERMINAL A/C S/W** OF A/C AUTO AMPLIFIER FROM **TERMINAL C12** OF A/C CONTROL ASSEMBLY. WHEN THIS HAPPENS, A SIGNALS IS OUTPUT FROM **TERMINAL A/C** OF A/C AUTO AMPLIFIER TO **TERMINAL 3** OF A/C AMPLIFIER.

AS A RESULT, THE CURRENT FLOWING FROM **TERMINAL 3** OF A/C MAGNET CLUTCH RELAY TO **TERMINAL 8** OF A/C AMPLIFIER FLOWS FROM **TERMINAL 15** OF A/C AMPLIFIER TO **GROUND** AND TURNS IN THE MAGNET CLUTCH RELAY.

BECAUSE THE MAGNET CLUTCH IS ON, THE A/C COMPRESSOR OPERATES, CAUSING THE CURRENT FLOWING FROM A/C IDLE–UP VSV TO **TERMINAL 6** OF A/C AMPLIFIER TO FLOW TO **TERMINAL 15** OF A/C AMPLIFIER → **GROUND**, AND TURNS ON THE VSV TO AVOID LOWERING THE ENGINE RPM DURING AIR CONDITIONER OPERATION.

WHEN ANY OF THE FOLLOWING SIGNALS ARE INPUT TO THE A/C AMPLIFIER, THE AMPLIFIER OPERATES TO TURN OFF THE AIR CONDITIONER:

* ENGINE HIGH RPM SIGNAL
* COOLANT HIGH TEMP. SIGNAL IS HIGH.
* A SIGNAL THAT THE TEMPERATURE AT THE AIR OUTLET IS LOW.
* A SIGNAL THAT THERE IS A LARGE DIFFERENCE BETWEEN ENGINE RPM AND COMPRESSOR RPM
* A SIGNAL THAT THE REFRIGERANT PRESSURE IS ABNORMALLY HIGH OR LOW.

SERVICE HINTS

A 4 A/C MAGNET CLUTCH
4–GROUND : APPROX. **3.7** Ω

A 5 A/C PRESSURE SW
3–2 : OPEN ABOVE APPROX. **13.5** KG/CM^2 (**192** PSI, **1323** KPA)
CLOSED BELOW APPROX. **10** KG/CM^2 (**142** PSI, **980** KPA)
1–4 : OPEN WITH PRESSURE LESS THAN **2.1** KG/CM^2 (**30** PSI, **206** KPA) OR ABOVE **27** KG/CM^2 (**384** PSI, **2648** KPA)

A17 A/C AMPLIFIER
8–15 : CONTINUITY WITH A/C SW (A/C CONTROL ASSEMBLY) ON AND IGNITION SW AT **ON** POSITION
14–15 : ALWAYS CONTINUITY
14–GROUND: ALWAYS CONTINUITY
15–GROUND: ALWAYS CONTINUITY
13–GROUND: APPROX. **12** VOLTS WITH IGNITION SW ON

A23 A/C ROOM TEMP. SENSOR
1–2 : APPROX. **1.7** KΩ AT **25**˚C (**77**˚F)

A26 A/C THERMISTOR
1–2, 3–4 : APPROX. **4852** Ω AT **0**˚C (**32**˚F)
APPROX. **2341** Ω AT **15**˚C (**39**˚F)
APPROX. **1500** Ω AT **25**˚C (**77**˚F)

A29 AIR MIX CONTROL SERVO MOTOR
2–GROUND : APPROX. **12** VOLTS WITH TEMPERATURE CONTROL VOLUME AT **WARM** TO **COOL** POSITION
6–GROUND : APPROX. **12** VOLTS WITH TEMPERATURE CONTROL VOLUME AT **COOL** TO **WARM** POSITION
1–3 : ALWAYS APPROX. **6** KΩ

A32(A), A33(B) A34(C) AUTO A/C AMPLIFIER
B–GROUND : APPROX. **12** VOLTS
IG–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION
HR–GROUND : CONTINUITY WITH BLOWER SW (A/C CONTROL ASSEMBLY) ON OR AUTO SW ON
S5–GROUND : APPROX. **5** VOLTS WITH IGNITION SW ON
SG–GROUND : ALWAYS CONTINUITY
REC–GROUND : APPROX. **12** VOLTS WITH A/C CONTROL ASSEMBLY AT **RECIRC** POSITION
FRS–GROUND : APPROX. **12** VOLTS WITH A/C CONTROL ASSEMBLY AT **FRESH** POSITION
GND–GROUND: ALWAYS CONTINUITY

B 3 BLOWER CONTROL RELAY
3–4 : CLOSED WITH BLOWER SW (A/C CONTROL ASSEMBLY) AT **ON** POSITION

B 6 BLOWER RESISTOR
1–4 : APPROX. **2.4** Ω

W 4 WATER TEMP. SW (FOR FANS CONTROL)
1–2 : OPEN ABOVE APPROX. **90**˚C (**194**˚F)
CLOSED BELOW APPROX. **83**˚C (**181.4**˚F)

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A 1	26 (5S–FE)	A24	28	C 2 A	28
A 2	26 (5S–FE)	A25	28	C 3 B	28
A 3	26 (5S–FE)	A26	28	E 7 A	29
A 4	26 (5S–FE)	A27	28	E 7 B	29
A 5	26 (5S–FE)	A29	28	J 4	29
A 6	26 (5S–FE)	A30	28	J 5	29
A17	28	A32 A	28	J 6	29
A18 A	28	A33 B	28	R 1	26 (5S–FE)
A19 C	28	A34 C	28	R 4	29
A21 B	28	B 3	28	W 4	26 (5S–FE)
A22	28	B 4	28		
A23	28	B 6	28		

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
4	24	R/B NO. 4 (RIGHT KICK PANEL)
5	24	R/B NO. 5 (ENGINE COMPARTMENT FRONT RIGHT)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2A	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2C	20	ENGINE WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2D	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2E		
3A	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	32 (5S–FE)	COWL WIRE AND ENGINE ROOM MAIN WIRE (FRONT SIDE OF RIGHT FRONT FENDER)
	34 (4A–FE)	
EB2	32 (5S–FE)	ENGINE WIRE AND COWL WIRE (REAR SIDE OF RIGHT FRONT FENDER)
	34 (4A–FE)	
IG1	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)
IH1	36	ENGINE WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)
IJ1	36	COWL WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)
IJ3		
IQ1	36	COWL WIRE AND A/C NO. 2 WIRE (BESIDE HEATER UNIT)
IQ2		
IQ3		

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (5S–FE)	FRONT RIGHT FENDER
	34 (4A–FE)	
EB	32 (5S–FE)	FRONT LEFT FENDER
	34 (4A–FE)	
ID	36	LEFT KICK PANEL
IG	36	R/B NO. 4 SET BOLT

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32 (5S–FE)	ENGINE ROOM MAIN WIRE	E10	34 (4A–FE)	COWL WIRE
	34 (4A–FE)		I 3	36	
E 3	32 (5S–FE)		I 4		
	34 (4A–FE)		I 5		
E 4	32 (5S–FE)		I 7	36	ENGINE WIRE
	34 (4A–FE)		I 8	36	COWL WIRE
E10	32 (5S–FE)	COWL WIRE	I11	36	A/C NO. 2 WIRE

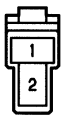
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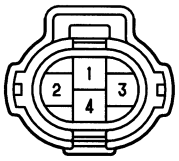
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A 4 GRAY



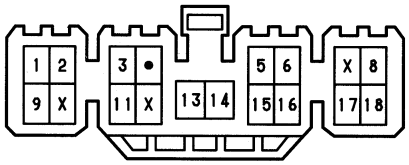
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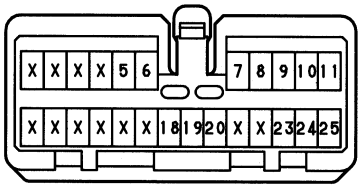
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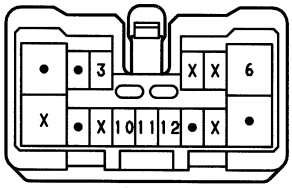
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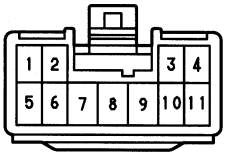
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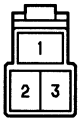
A19 (C)



A21 (B)



A22



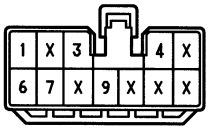
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A24



A25



A26



A27



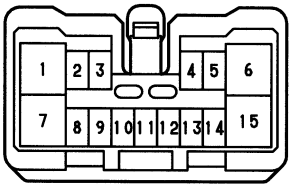
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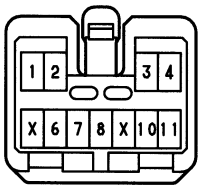
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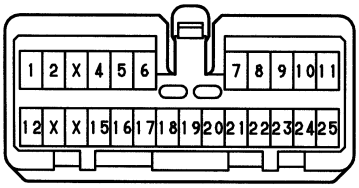
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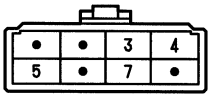
A33 (B)



A34 (C)



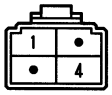
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B 4 BLACK



B 6 BLACK



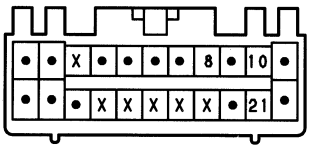
C 2 (A) DARK GRAY



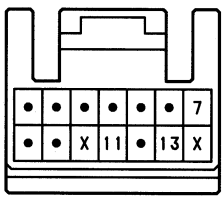
C 3 (B) DARK GRAY



E 7 (A) DARK GRAY



E 7 (B) DARK GRAY

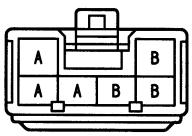


J 4



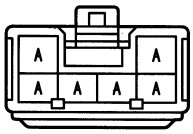
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J 5



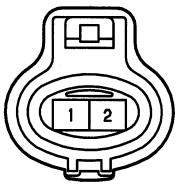
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J 6

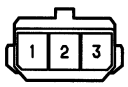


(HINT:SEE PAGE 7)

R 1 GRAY



R 4



W 4 GRAY



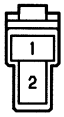
A 1



A 2 BLACK



A 3 BLACK



A 4 (A) GRAY



A 4 (B) BLACK



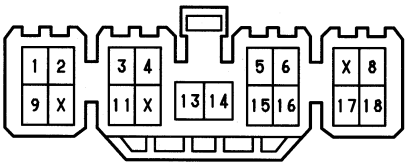
A 5 BLACK



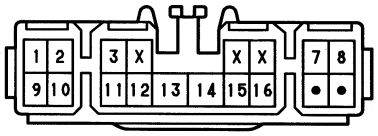
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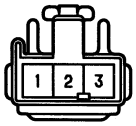
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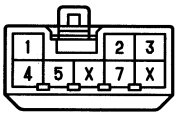
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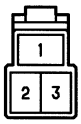
A19 (B)



A20 (C)



A22



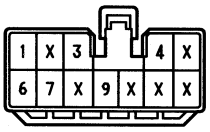
A23



A24



A25



A26



A27



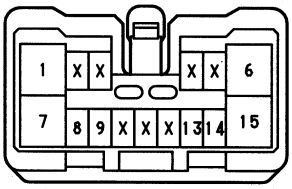
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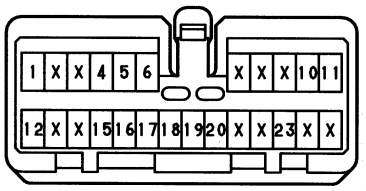
A30 GRAY



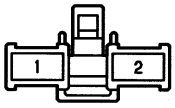
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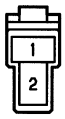
A34 (A)



B 4 (A) BLACK



B 4 (B) BLACK



B 5



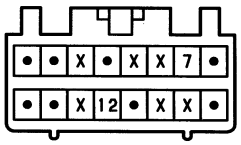
C 2 (A) DARK GRAY



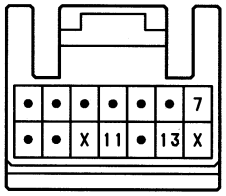
C 3 (B) DARK GRAY



E 5 (B) DARK GRAY



E 7 (A) DARK GRAY



E 9 BLACK

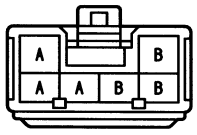


J 4



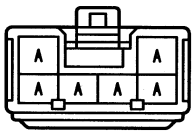
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J 5



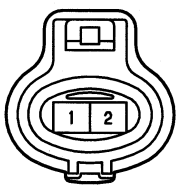
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J 6

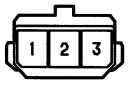


(HINT:SEE PAGE 7)

R 1 GRAY



R 4

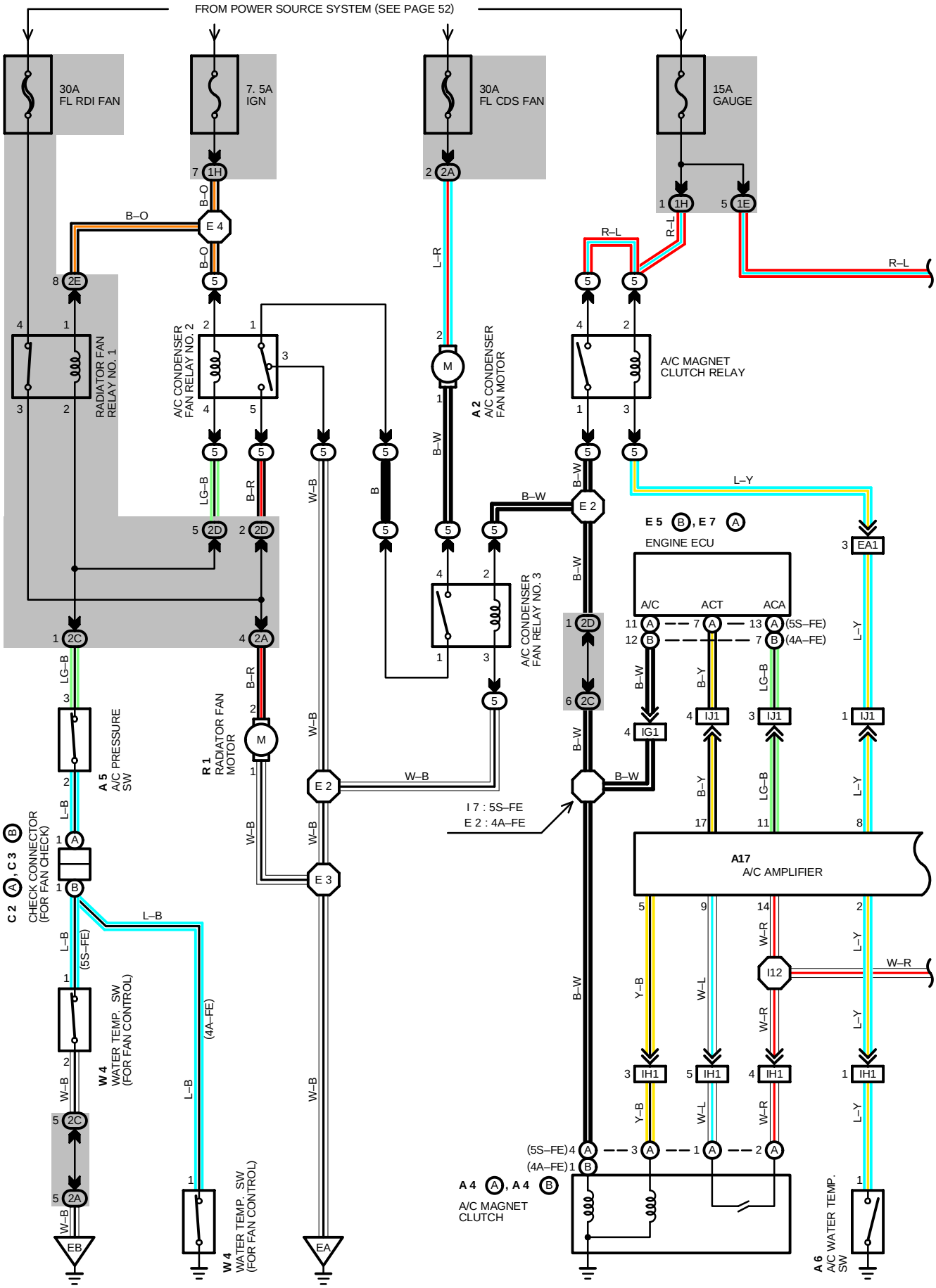


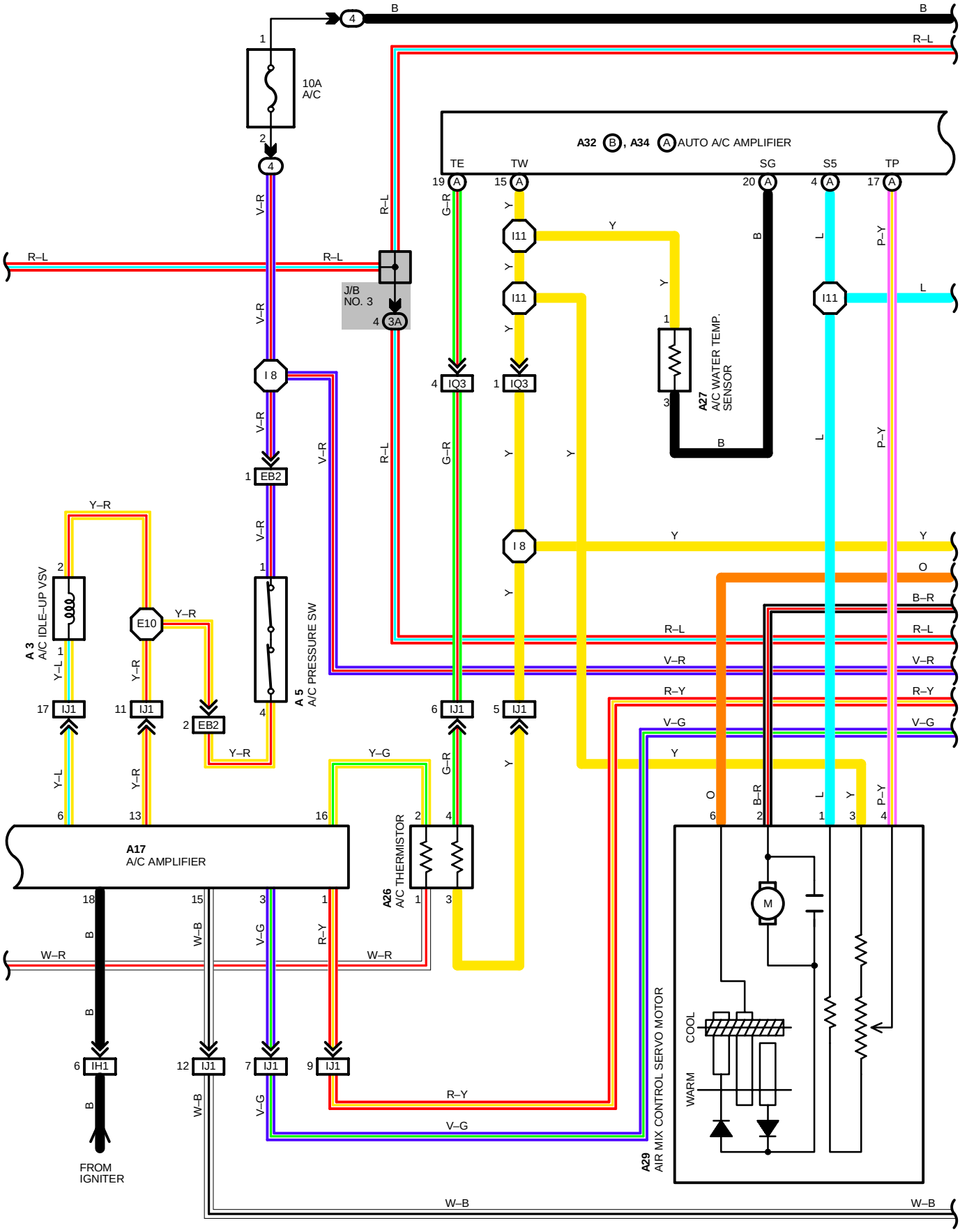
(5S-FE) W 4 GRAY

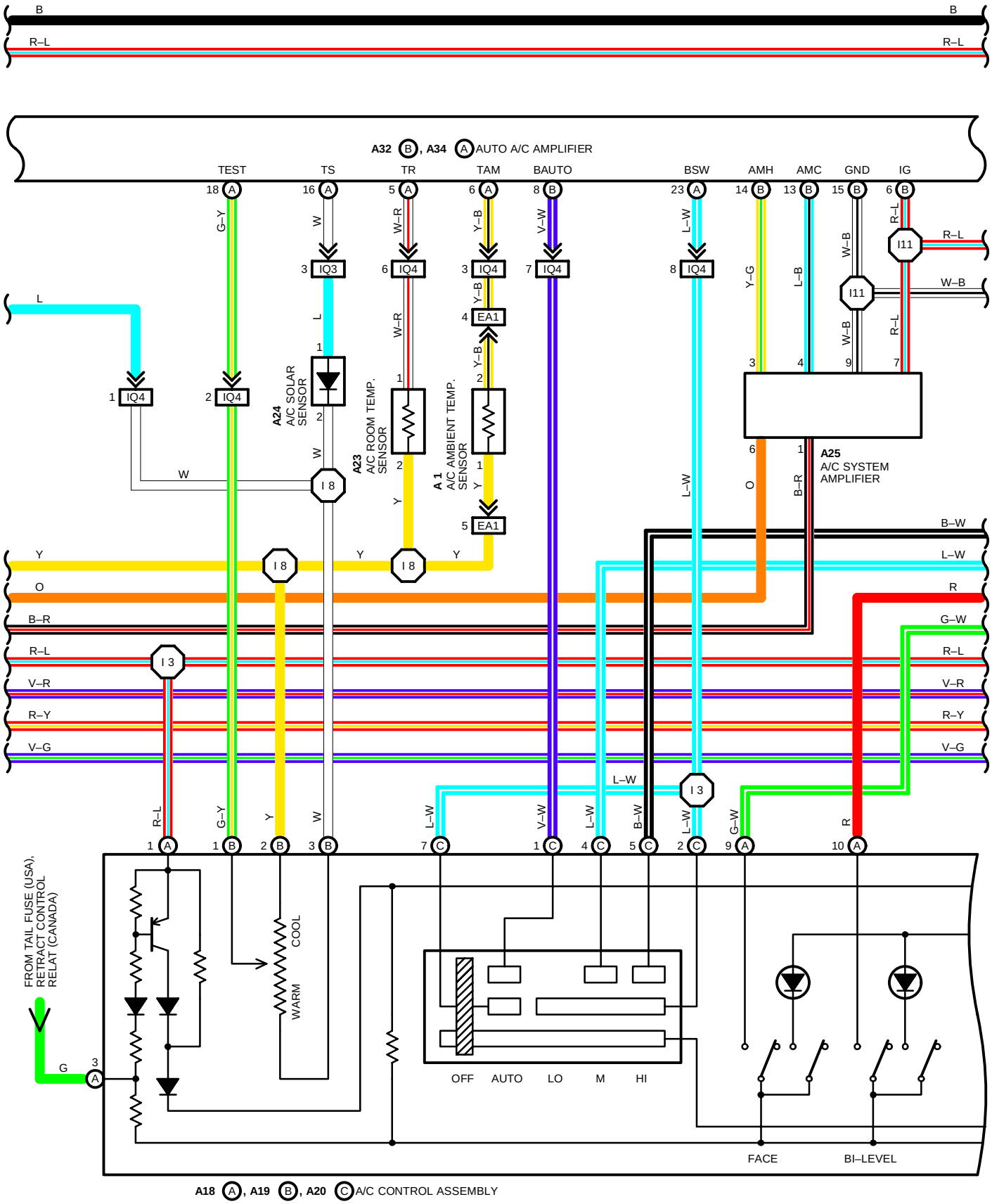


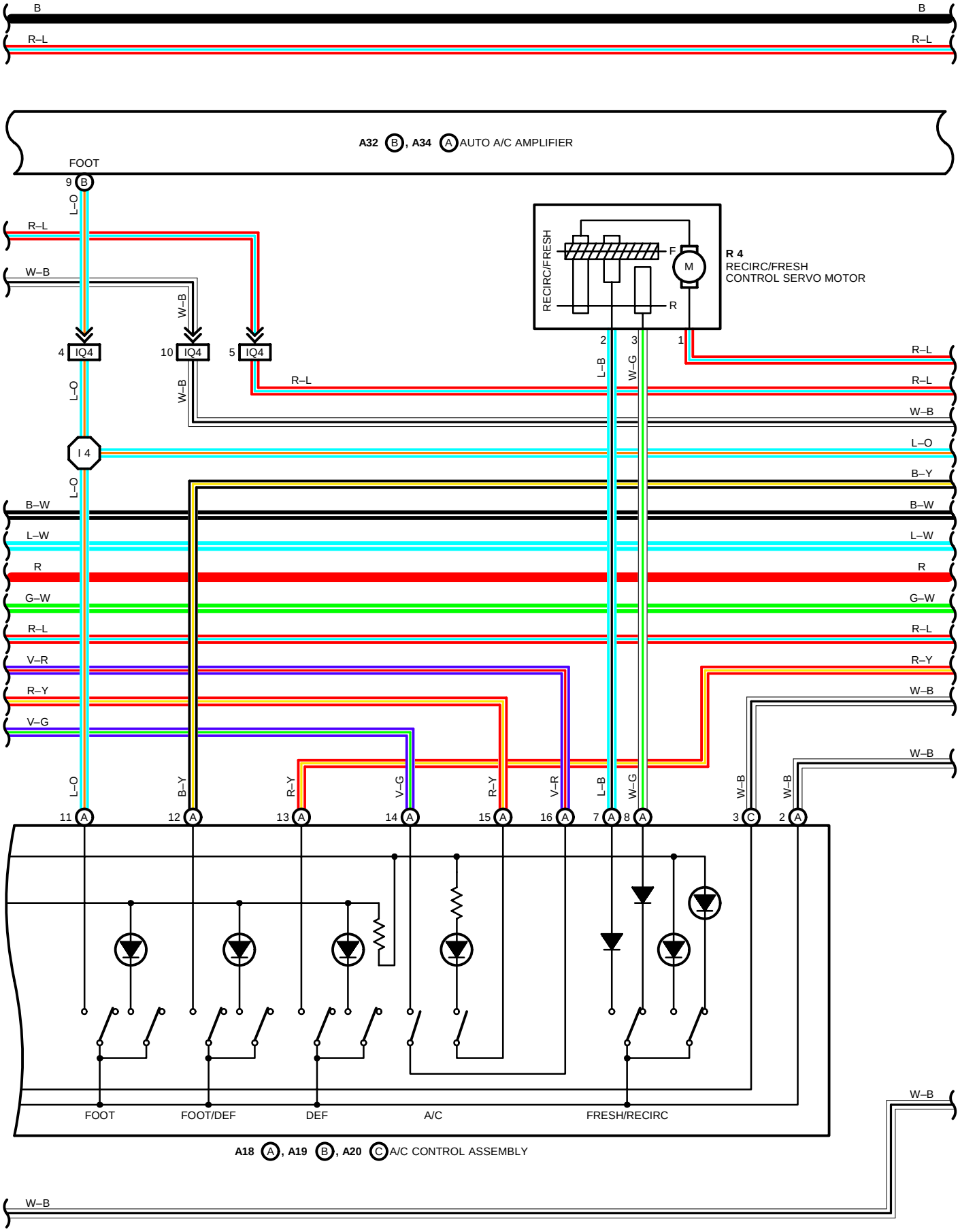
(4A-FE) W 4 GRAY

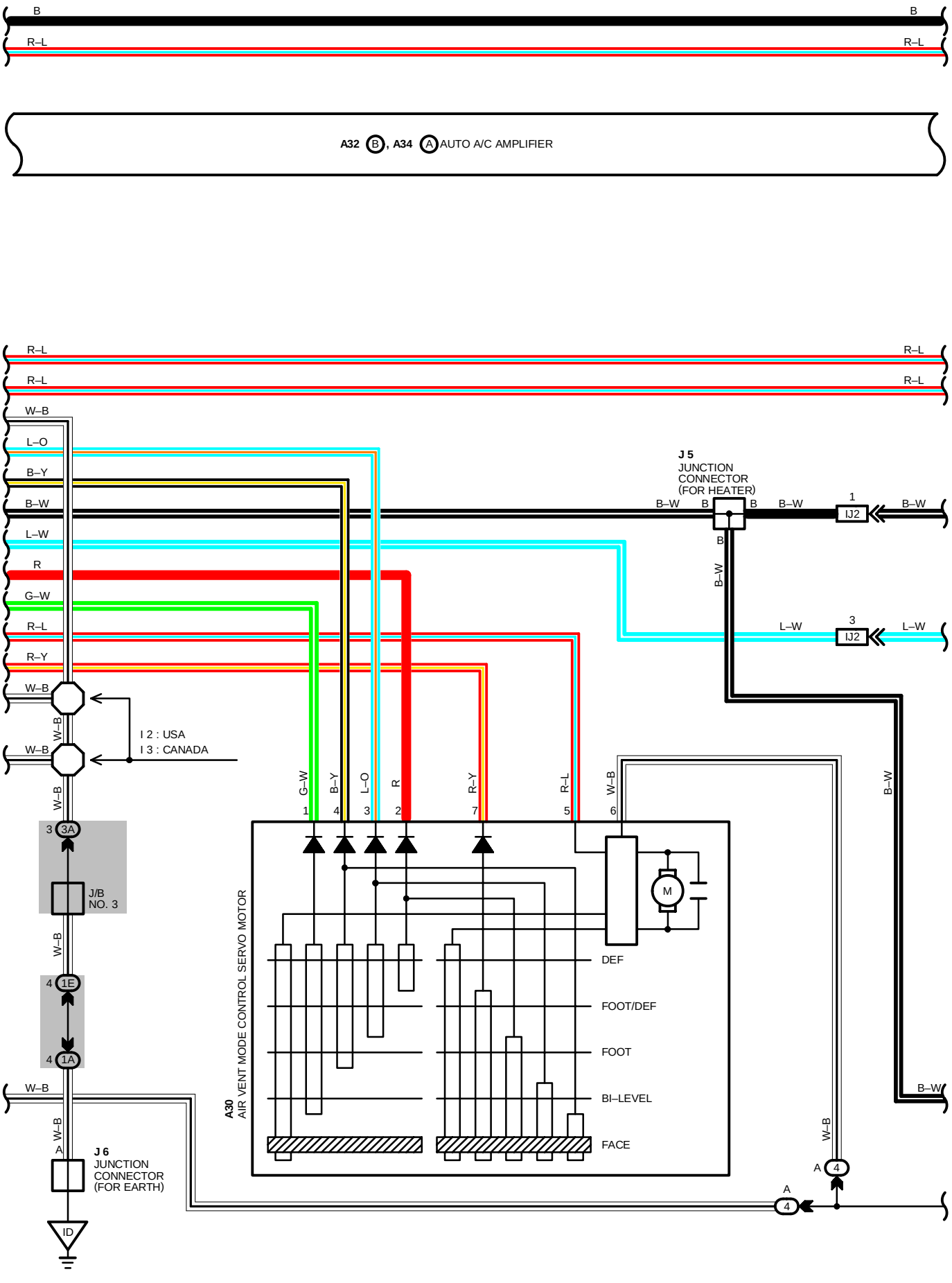


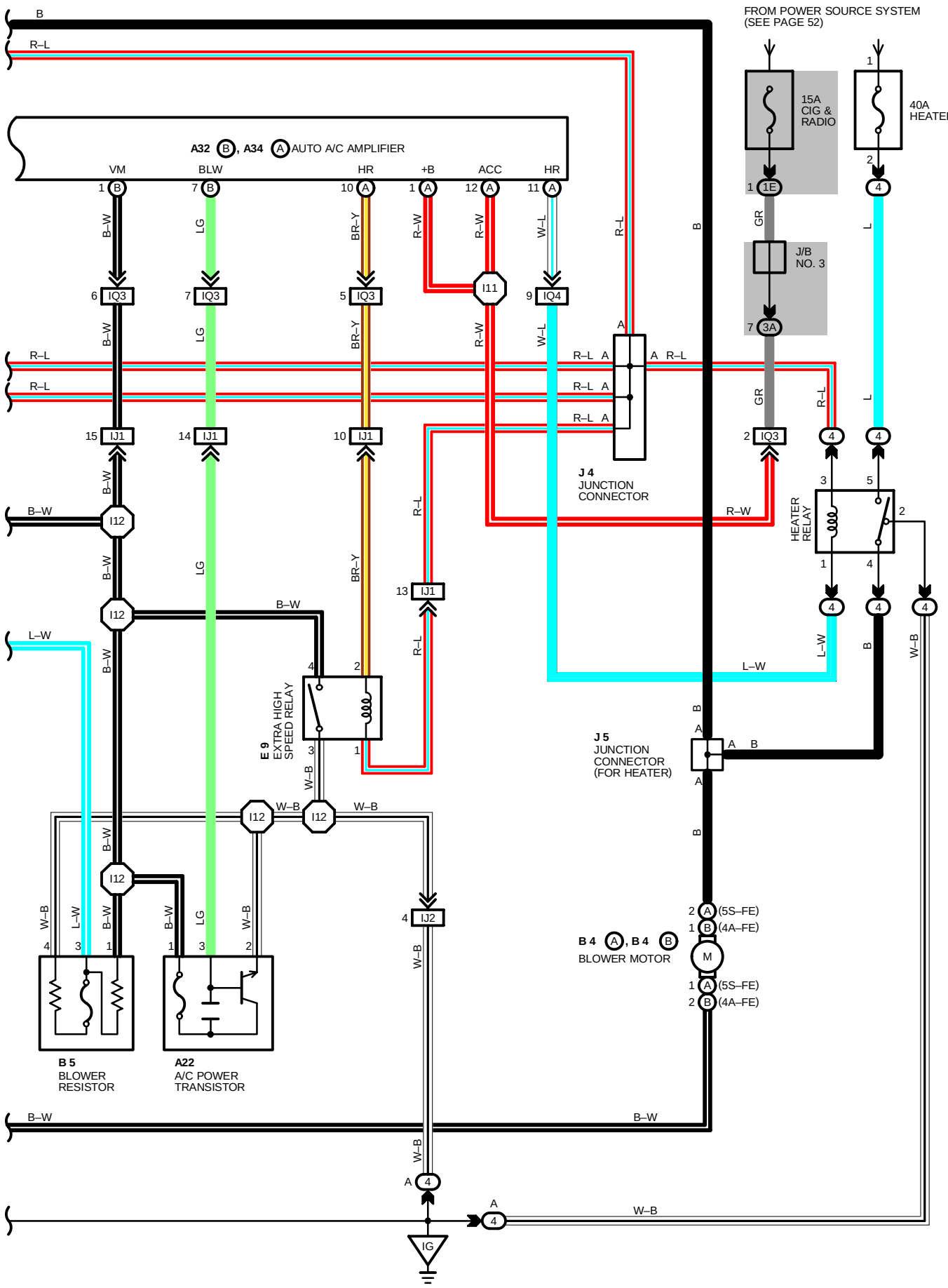

FROM POWER SOURCE SYSTEM (SEE PAGE 52)
30A
FL RDI FAN
7. 5A
IGN
30A
FL CDS FAN
15A
GAUGE
RADIATOR FAN
RELAY NO. 1
A/C CONDENSER
FAN RELAY NO. 2
A2
A/C CONDENSER
FAN MOTOR
A/C MAGNET
CLUTCH RELAY
A/C CONDENSER
FAN RELAY NO. 3
R1
RADIATOR FAN
MOTOR
A5
A/C PRESSURE
SW
C2 , C3
CHECK CONNECTOR
(FOR FAN CHECK)
W4
WATER TEMP. SW
(FOR FAN CONTROL)
W4
WATER TEMP. SW
(FOR FAN CONTROL)
E5 , E7
ENGINE ECU
A/C
ACT
ACA
(5S–FE)
(4A–FE)
A17
A/C AMPLIFIER
I7 : 5S–FE
E2 : 4A–FE
A4 , A4
A/C MAGNET
CLUTCH
A6
A/C WATER TEMP.
SW
B–O
L–R
B–W
R–L
L–Y
LG–B
B–R
W–B
L–B
B
Y–B
W–L
W–R
B–Y
(5S–FE)
(4A–FE)


10A
A/C
J/B
NO. 3
A32 B, A34 A AUTO A/C AMPLIFIER
TE
TW
SG
S5
TP
A27
A/C WATER TEMP.
SENSOR
A 3
A/C IDLE–UP VSV
A 5
A/C PRESSURE SW
A17
A/C AMPLIFIER
A26
A/C THERMISTOR
A29
AIR MIX CONTROL SERVO MOTOR
COOL
WARM
FROM
IGNITER


B
R–L
A32 B, A34 A AUTO A/C AMPLIFIER
TEST
TS
TR
TAM
BAUTO
BSW
AMH
AMC
GND
IG
A24 A/C SOLAR SENSOR
A23 A/C ROOM TEMP. SENSOR
A 1 A/C AMBIENT TEMP. SENSOR
A25 A/C SYSTEM AMPLIFIER
IQ3
IQ4
EA1
I 8
I 3
I11
FROM TAIL FUSE (USA), RETRACT CONTROL RELAT (CANADA)
COOL
WARM
OFF
AUTO
LO
M
HI
FACE
BI–LEVEL
A18 A, A19 B, A20 C A/C CONTROL ASSEMBLY
W–B


B
R–L
A32 B, A34 A AUTO A/C AMPLIFIER
FOOT
9 B
L–O
W–B
4 IQ4
10 IQ4
5 IQ4
I 4
RECIRC/FRESH
F
M
R
R 4
RECIRC/FRESH
CONTROL SERVO MOTOR
2
3
1
L–B
W–G
B–Y
G–W
V–R
R–Y
V–G
W–B
11 A
12 A
13 A
14 A
15 A
16 A
7 A
8 A
3 C
2 A
FOOT
FOOT/DEF
DEF
A/C
FRESH/RECIRC
A18 A, A19 B, A20 C A/C CONTROL ASSEMBLY


B
R–L
A32 B, A34 A AUTO A/C AMPLIFIER
J 5
JUNCTION
CONNECTOR
(FOR HEATER)
IJ2
L–O
B–Y
B–W
L–W
R
G–W
R–Y
W–B
I 2 : USA
I 3 : CANADA
J/B
NO. 3
3A
1E
1A
J 6
JUNCTION
CONNECTOR
(FOR EARTH)
ID
A30
AIR VENT MODE CONTROL SERVO MOTOR
M
DEF
FOOT/DEF
FOOT
BI–LEVEL
FACE


FROM POWER SOURCE SYSTEM
(SEE PAGE 52)
15A
CIG &
RADIO
40A
HEATER
A32 B, A34 A AUTO A/C AMPLIFIER
VM
BLW
HR
+B
ACC
HR
J/B
NO. 3
J 4
JUNCTION
CONNECTOR
HEATER
RELAY
E 9
EXTRA HIGH
SPEED RELAY
J 5
JUNCTION
CONNECTOR
(FOR HEATER)
B 4 A, B 4 B
BLOWER MOTOR
(5S–FE)
(4A–FE)
B 5
BLOWER
RESISTOR
A22
A/C POWER
TRANSISTOR
IG

SYSTEM OUTLINE

1. COOLING FAN OPERATION

WHEN THE IGNITION SW IS TURNED ON, THE CURRENT FROM IGN FUSE FLOWS TO **TERMINAL 3** OF RADIATOR FAN RELAY NO. 1 → **TERMINAL 4** → **TERMINAL 3** OF THE A/C PRESSURE SW → **TERMINAL 2** → **TERMINAL 1** OF WATER TEMP. SW (FOR FANS CONTROL) → **TERMINAL 2** (5S–FE) → **GROUND,** FROM **TERMINAL 2** OF A/C FAN RELAY NO. 2 → **TERMINAL 4** → **TERMINAL 3** OF A/C PRESSURE SW → **TERMINAL 2** → **TERMINAL 1** OF WATER TEMP. SW (FOR FANS CONTROL) → **TERMINAL 2** (5S–FE) → **GROUND,** CAUSING RELAY NO. 1 AND RELAY NO. 2 OF EACH FAN TO TURN ON.

***** OPERATION AT LOW SPEED

WHEN THE A/C SW (A/C CONTROL ASSEMBLY) IS TURNED ON AND THE AIR CONDITIONER OPERATES, THE CURRENT FLOWS FROM GAUGE FUSE FLOWS TO **TERMINAL 2** OF A/C MAGNET CLUTCH RELAY → **TERMINAL 3** → **TERMINAL 8** OF A/C AMPLIFIER CAUSING A/C MAGNET CLUTCH RELAY TO TURN ON.

AT THAT TIME, THE CURRENT FROM GAUGE FUSE FLOWS TO **TERMINAL 4** OF A/C MAGNET CLUTCH RELAY → **TERMINAL 1** → **TERMINAL 4** OF A/C MAGNET CLUTCH → **GROUND,** AND FROM **TERMINAL 1** OF A/C MAGNET CLUTCH RELAY → **TERMINAL 2** OF A/C FAN RELAY NO. 3 → **TERMINAL 3** → **GROUND**.

AS A RESULT, A/C MAGNET CLUTCH AND A/C FAN RELAY NO. 3 TURNS ON AND THE CURRENT FLOWS FROM FL CDS FAN → **TERMINAL 2** OF A/C CONDENSER FAN MOTOR → **TERMINAL 1** → **TERMINAL 4** OF A/C FAN RELAY NO. 3 → **TERMINAL 1** → **TERMINAL 1** OF A/C FAN RELAY NO. 2 → **TERMINAL 5** → **TERMINAL 2** OF A/C CONDENSER FAN MOTOR → **TERMINAL 1** → **GROUND**, FLOWING TO EACH FAN MOTOR IN SERIES, CAUSING THE COOLING FAN TO ROTATE AT LOW SPEED.

***** OPERATION AT HIGH SPEED

DURING A/C OPERATION, WHEN THE PRESSURE OF A/C COMPRESSOR BECOMES HIGHER THAN NORMAL PRESSURE (MORE THAN **14.3** KG/CM^2 **1401** KPA, **203** PSI), THE A/C PRESSURE SW TURNS OFF.

AS A RESULT, FAN RELAY NO. 1 AND NO. 2 TURNS OFF AND THE CURRENT FLOWS FROM FL RDI FAN → **TERMINAL 1** OF RADIATOR FAN RELAY NO. 1 → **TERMINAL 2** → **TERMINAL 2** OF RADIATOR FAN MOTOR → **TERMINAL 1** → **GROUND,** AND FROM FL CDS FAN → **TERMINAL 2** OF A/C CONDENSER FAN MOTOR → **TERMINAL 1** → **TERMINAL 4** OF A/C FAN RELAY NO. 3 → **TERMINAL 1** → **TERMINAL 1** OF A/C FAN RELAY NO. 2 → **TERMINAL 3** → **GROUND**, FLOWING TO EACH FAN MOTOR IN PARALLEL CAUSING THE COOLING FAN TO ROTATE AT HIGH SPEED. WHEN THE ENGINE COOLANT TEMPERATURE BECOMES MORE THAN ABOUT **90**˚ C **(194**˚F), THE WATER TEMP. SW TURNS OFF AND THE SAME OPERATION AS ABOVE IS PERFORMED.

2. HEATER BLOWER MOTOR OPERATION (DIAL TYPE BLOWER CONTROL SW (W/ AUTO A/C))

CURRENT IS APPLIED AT ALL TIMES THROUGH THE HEATER FUSE TO **TERMINAL 5** OF HEATER RELAY. WHEN THE IGNITION SW IS TURNED ON, CURRENT FLOWS THROUGH GAUGE FUSE TO **TERMINAL 3** OF HEATER RELAY → **TERMINAL 1** → **TERMINAL HR** OF A/C AUTO AMPLIFIER. AT THE SAME TIME, CURRENT ALSO FLOWS FROM GAUGE FUSE TO **TERMINAL IG** OF A/C AUTO AMPLIFIER, **TERMINAL B2** OF A/C CONTROL ASSEMBLY AND **TERMINAL A1** OF A/C CONTROL ASSEMBLY.

***** LOW SPEED OPERATION (OPERATION AT MANUAL)

CURRENT TO **TERMINAL 3** OF HEATER RELAY FLOWING TO TERMINAL OF HEATER RELAY → **TERMINAL B2** OF A/C CONTROL ASSEMBLY → **TERMINAL B3** → **GROUND** AND TURNS THE HEATER RELAY ON.

THIS CAUSES THE CURRENT TO **TERMINAL 5** OF THE HEATER RELAY TO FLOW TO **TERMINAL 4** OF HEATER RELAY → **TERMINAL 2** (5S–FE) OR **TERMINAL 1** (4A–FE) OF BLOWER MOTOR → MOTOR → **TERMINAL 1** (5S–FE) OR **TERMINAL 2** (4A–FE) → **TERMINAL 1** OF BLOWER RESISTOR → **TERMINAL 4** → **GROUND,** CAUSING THE BLOWER MOTOR TO ROTATE AT LOW SPEED.

***** HIGH SPEED OPERATION (OPERATION AT MANUAL)

CURRENT TO **TERMINAL 3** OF HEATER RELAY FLOWS TO **TERMINAL 1** OF HEATER RELAY → **TERMINAL B2** OF A/C CONTROL ASSEMBLY → **TERMINAL B3** → **GROUND,** TURNING THE HEATER RELAY ON.

AT THE SAME TIME, CURRENT FLOWING TO **TERMINAL 5** OF THE HEATER RELAY FLOWS TO **TERMINAL 4** → **TERMINAL 2** (5S–FE) OR **TERMINAL 1** (4A–FE) OF BLOWER MOTOR → **TERMINAL 1** (5S–FE) OR **TERMINAL 2** (4S–FE) → **TERMINAL B5** OF A/C CONTROL CONTROL ASSEMBLY → **TERMINAL B3** → **GROUND,** CAUSING THE BLOWER MOTOR TO ROTATE AT HIGH SPEED.

***** MEDIUM SPEED OPERATION (OPERATION AT MANUAL M1, M2)

THE CURRENT TO **TERMINAL 3** OF HEATER RELAY FLOWS TO **TERMINAL 1** OF HEATER RELAY → **TERMINAL B2** OF A/C CONTROL ASSEMBLY → **TERMINAL B3** → **GROUND** AND TURNS THE HEATER RELAY ON.

AS A RESULT, THE CURRENT TO **TERMINAL 5** OF HEATER RELAY FLOWS TO **TERMINAL 4** → **TERMINAL 2** (5S–FE) OR **TERMINAL 1** (4A–FE) OF BLOWER MOTOR → **TERMINAL 1** (5S–FE) OR **TERMINAL 2** (4A–FE) → **TERMINAL 1** OF BLOWER RESISTOR → **TERMINAL 3** → **TERMINAL B4** OF A/C CONTROL ASSEMBLY → **TERMINAL B3** → **GROUND** AND CAUSES THE BLOWER MOTOR TO ROTATE AT MEDIUM SPEED.

***** AUTO FUNCTION

WHEN THE AUTO SW (A/C CONTROL ASSEMBLY) IS TURNED ON, SIGNALS ARE INPUT TO **TERMINAL BSW** OF A/C AUTO AMPLIFIER AND **TERMINAL B** AUTO OF A/C AUTO AMPLIFIER CONTROLLING THE CURRENT FLOW FROM **TERMINAL BLW** OF THE A/C AUTO AMPLIFIER TO **TERMINAL 3** OF POWER TRANSISTOR → **TERMINAL 2** → **GROUND**, THE A/C AUTO AMPLIFIER CONTROLS THE BLOWER MOTOR STEPLESSY.

3. OPERATION OF RECIRC/FRESH CONTROL SERVO MOTOR

(SWITCHING FROM FRESH TO RECIRC)

WITH IGNITION SW TURNED ON, THE CURRENT FLOWS FROM GAUGE FUSE TO **TERMINAL 1** OF RECIRC/FRESH CONTROL SERVO MOTOR. WHEN THE RECIRC/FRESH SW IS SWITCHED TO THE RECIRC SIDE, TO CURRENT FLOWS FROM **TERMINAL 1** OF RECIRC/FRESH CONTROL SERVO MOTOR → **TERMINAL 2** → **TERMINAL A18** OF RECIRC/FRESH CONTROL SERVO MOTOR → **TERMINAL A2** → **GROUND,** THE MOTOR ROTATES AND THE DAMPER MOVES TO THE RECIRC SIDE.

WHEN IT IS IN THE **RECIRC** POSITION, THE CURRENT IS CUT INSIDE THE SERVO MOTOR AND THE DAMPER STOPS AT THAT POSITION.

(SWITCHING FROM RECIRC TO FRESH)

WITH IGNITION SW ON, WHEN THE RECIRC/FRESH SW IS SWITCHED TO THE FRESH SIDE, THE CURRENT FLOWS FROM **TERMINAL 1** OF RECIRC/FRESH CONTROL SERVO MOTOR → **TERMINAL 3** → **TERMINAL A8** OF A/C CONTROL ASSEMBLY → **TERMINAL A2** → **GROUND,** THE MOTOR ROTATES AND THE DAMPER MOVES TO THE FRESH SIDE. WHEN IT IS IN THE **FRESH** POSITION, THE CURRENT IS CUT INSIDE THE SERVO MOTOR AND THE DAMPER STOPS AT THAT POSITION.

4. OPERATION OF AIR VENT MODE CONTROL SERVO MOTOR

WITH IGNITION SW TURNED ON, THE CURRENT FLOWS FROM GAUGE FUSE TO **TERMINAL 5** OF AIR VENT MODE CONTROL SERVO MOTOR → **TERMINAL 6** → **GROUND,** AND THE DAMPER MOVES TO THE POSITION OF THE MODE SELECTION SW OF THE CONTROL ASSEMBLY SWITCH IS ON.

WHEN THE MODE SELECTION SW OF A/C CONTROL ASSEMBLY IS MOVED TO **DEF** POSITION FROM THE DAMPER IN THE **FACE** POSITION, THE CURRENT FLOWS FROM **TERMINAL 7** OF AIR VENT MODE CONTROL SERVO MOTOR TO **TERMINAL A13** OF A/C CONTROL ASSEMBLY → **TERMINAL C2** → **GROUND.**

AS A RESULT, TO SERVO MOTOR OPERATES UNTIL THE DAMPER REACHES **DEF** POSITION.

WHEN THIS OCCURS THE CURRENT TO THE A/C CONTROL ASSEMBLY IS SHUT OFF AND ROTATION OF THE MOTOR STOPS.

SWITCHING TO OTHER MODES IS CONTROLLED BY THE SERVO MOTOR ACCORDING THE FLOWING CURRENT:

1. **FOOT/DEF** POSITION: THE CURRENT FLOWS FROM **TERMINAL 4** OF SERVO MOTOR TO **TERMINAL A12** OF A/C CONTROL ASSEMBLY.
2. **FOOT** POSITION: THE CURRENT FLOWS FROM **TERMINAL 3** OF SERVO MOTOR TO **TERMINAL A11** OF A/C CONTROL ASSEMBLY.
3. **BI–LEVEL** POSITION: THE CURRENT FLOWS FROM **TERMINAL 2** OF SERVO MOTOR TO **TERMINAL A10** OF A/C CONTROL ASSEMBLY.

5. OPERATION OF AIR MIX CONTROL SERVO MOTOR

WHEN THE TEMPERATURE CONTROL VOLUME IS TURNED TO THE COOL SIDE, A SIGNAL IS INPUT TO **TERMINAL TEST** OF A/C AUTO AMPLIFIER FROM **TERMINAL C1** OF A/C CONTROL ASSEMBLY.

AS A RESULT, THE CURRENT FLOWS FROM **TERMINAL MH** OF A/C AUTO AMPLIFIER TO **TERMINAL 2** OF AIR MIX CONTROL SERVO MOTOR **TERMINAL 6 TERMINAL MC** OF A/C AUTO AMPLIFIER → **TERMINAL GND** → **GROUND**. CAUSING THE AIR MIX CONTROL SERVO MOTOR TO ROTATE.

AT THIS TIME IS INPUT THE DAMPER OPENING ANGLE FROM **TERMINAL 4** OF SERVO MOTOR TO **TERMINAL TP** OF A/C AUTO AMPLIFIER THIS IS USED TO DETERMINE THE DAMPER **STOP** POSITION AND MAINTAIN THE SET TEMPERATURE.

WHEN THE TEMPERATURE CONTROL VOLUME IS TURNED TO THE WARM SIDE, IN A/C SYSTEM AMPLIFIER THE CURRENT FLOWS FROM SERVO MOTOR → **TERMINAL MC** OF A/C AUTO AMPLIFIER → **TERMINAL 6** OF AIR MIX CONTROL SERVO MOTOR → MOTOR → **TERMINAL 2** → **TERMINAL MH** OF A/C AUTO AMPLIFIER → **TERMINAL GND** → **GROUND**, ROTATING THE MOTOR IN REVERSE AND SWITCHING THE DAMPER FROM COOL TO WARM SIDE.

6. AIR CONDITIONER OPERATION

THE A/C AMPLIFIER RECEIVES VARIOUS SIGNALS, THE ENGINE RPM SIGNAL FROM THE IGNITER, OUTLET TEMPERATURE SIGNAL FROM THE A/C THERMISTOR, COOLANT TEMPERATURE FROM THE WATER TEMP. SENSOR, AND THE LOCK SIGNAL FM THE A/C COMPRESSOR, ETC.

WHEN THE ENGINE IS STARTED AND THE A/C SW (A/C CONTROL ASSEMBLY) IS TURNED ON, THE CURRENT FLOWS FROM A/C FUSE TO **TERMINAL 3** OF A/C AMPLIFIER.

AS A RESULT, THE CURRENT FLOWING FROM **TERMINAL 3** OF A/C MAGNET CLUTCH RELAY TO **TERMINAL 8** OF A/C AMPLIFIER FLOWS FROM **TERMINAL 15** OF A/C AMPLIFIER TO GROUND AND TURNS IN THE MAGNET CLUTCH RELAY.

BECAUSE THE MAGNET CLUTCH IS ON, THE A/C COMPRESSOR OPERATES, CAUSING THE CURRENT FLOWING FROM A/C IDLE–UP VSV TO **TERMINAL 6** OF A/C AMPLIFIER TO FLOW TO **TERMINAL 15** OF A/C AMPLIFIER → **GROUND**, AND TURNS ON THE VSV TO AVOID LOWERING THE ENGINE RPM DURING AIR CONDITIONER OPERATION.

WHEN ANY OF THE FLOWING SIGNALS ARE INPUT TO THE A/C AMPLIFIER, THE AMPLIFIER OPERATES TO TURN OFF THE AIR CONDITIONER:

* ENGINE HIGH RPM SIGNAL
* COOLANT HIGH TEMP. SIGNAL IS HIGH
* A SIGNAL THAT THE TEMPERATURE AT THE AIR OUTLET IS LOW
* A SIGNAL THAT THERE IS A LARGE DIFFERENCE BETWEEN ENGINE RPM AND COMPRESSOR RPM
* A SIGNAL THAT THE REFRIGERANT PRESSURE IS ABNORMALLY HIGH OR LOW.

SERVICE HINTS

A 4 A/C MAGNET CLUTCH
4–GROUND : APPROX. **3.7** Ω

A 5 A/C PRESSURE SW
3–2 : OPEN ABOVE APPROX. **13.5** KG/CM^2 (**192** PSI, **1323** KPA)
CLOSED BELOW APPROX. **10** KG/CM^2 (**142** PSI, **980** KPA)
1–4 : OPEN WITH PRESSURE LESS THAN **2.1** KG/CM^2 (**30** PSI, **206** KPA) OR ABOVE **27** KG/CM^2 (**384** PSI, **2648** KPA)

A17 A/C AMPLIFIER
8–15 : CONTINUITY WITH A/C SW (A/C CONTROL ASSEMBLY) ON AND IGNITION SW **ON** POSITION
14–15 : ALWAYS CONTINUITY
14–GROUND: ALWAYS CONTINUITY
15–GROUND: ALWAYS CONTINUITY
13–GROUND: APPROX. **12** VOLTS WITH IGNITION SW ON

A23 A/C ROOM TEMP. SENSOR
1–2 : APPROX. **1.7** KΩ AT **25**˚C (**77**˚F)

A26 A/C THERMISTOR
1–2, 3–4 : APPROX. **4852** Ω AT **0**˚C (**59**˚F)
APPROX. **2341** Ω AT **15**˚C (**59**˚F)
APPROX. **1500** Ω AT **25**˚C (**77**˚F)

A29 AIR MIX CONTROL SERVO MOTOR
2–GROUND : APPROX. **12** VOLTS WITH TEMPERATURE CONTROL VOLUME AT **WARM** TO **COOL** POSITION
6–GROUND : APPROX. **12** VOLTS WITH TEMPERATURE CONTROL VOLUME AT **COOL** TO **WARM** POSITION
1–3 : ALWAYS APPROX. **6** KΩ

A32(B), A34(A) AUTO A/C AMPLIFIER
B–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ACC** OR **ON** POSITION
IG–GROUND : APPROX. **12** VOLTS WITH IGNITION SW AT **ON** POSITION
HR–GROUND : CONTINUITY WITH BLOWER SW (A/C CONTROL ASSEMBLY) ON OR AUTO SW (A/C CONTROL ASSEMBLY) ON
S5–GROUND : APPROX. **5** VOLTS WITH IGNITION SW ON
SG–GROUND : ALWAYS CONTINUITY
REC–GROUND : APPROX. **12** VOLTS WITH A/C CONTROL ASSEMBLY AT **RECIRC** POSITION
FRS–GROUND : APPROX. **12** VOLTS WITH A/C CONTROL ASSEMBLY AT **FRESH** POSITION
GND–GROUND: ALWAYS CONTINUITY

B 5 BLOWER RESISTOR
1–3 : APPROX. **0.84** Ω
3–4 : APPROX. **1.48** Ω

W 4 WATER TEMP. SW (FOR FANS CONTROL)
1–2 : OPEN ABOVE APPROX. **90**˚C (**194**˚F)
CLOSED BELOW APPROX. **83**˚C (**181.4**˚F)

: PARTS LOCATION

CODE		SEE PAGE	CODE		SEE PAGE	CODE		SEE PAGE
A 1		26 (5S–FE), 27 (4A–FE)	A23		28	C 2	A	26 (5S–FE), 27 (4A–FE)
A 2		26 (5S–FE), 27 (4A–FE)	A24		28	C 3	B	26 (5S–FE), 27 (4A–FE)
A 3		26 (5S–FE), 27 (4A–FE)	A25		28	E 5	B	29
A 4	A	26	A26		28	E 7	A	29
	B	27	A27		28	E 9		29
A 5		26 (5S–FE), 27 (4A–FE)	A29		28	J 4		29
A 6		26 (5S–FE), 27 (4A–FE)	A30		28	J 5		29
A17		28	A32	B	28	J 6		29
A18	A	28	A34	A	28	R 1		26 (5S–FE), 27 (4A–FE)
A19	B	28	B 4	A	28	R 4		29
A20	C	28		B	28	W 4		26 (5S–FE), 27 (4A–FE)
A22		28	B 5		28			

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
4	24	R/B NO. 4 (RIGHT KICK PANEL)
5	24	R/B NO. 5 (ENGINE COMPARTMENT FRONT RIGHT)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2A	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2C	20	ENGINE WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2D	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2E		
3A	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

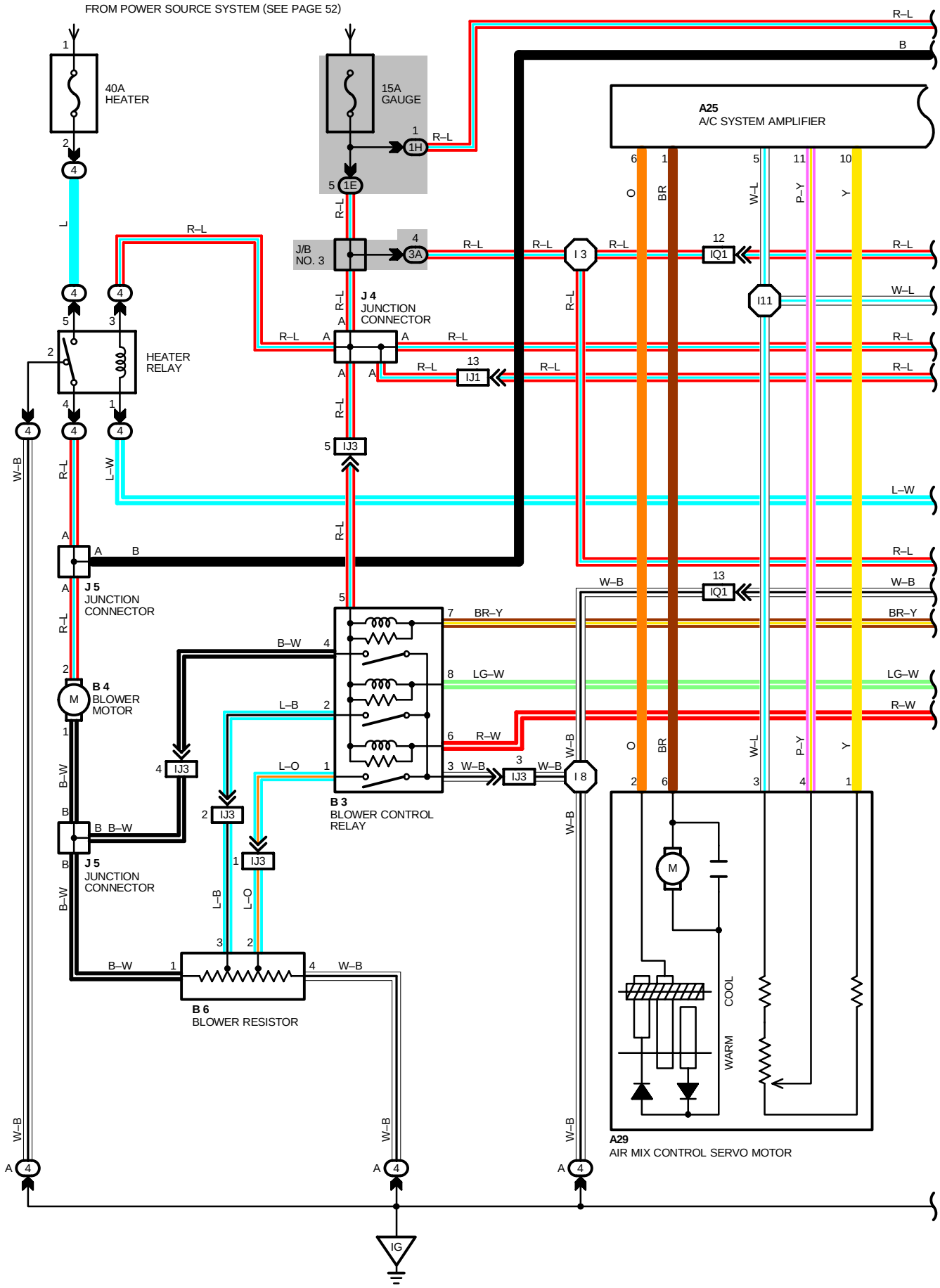
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	32 (5S–FE)	COWL WIRE AND ENGINE ROOM MAIN WIRE (FRONT SIDE OF RIGHT FRONT FENDER)
	34 (4A–FE)	
EB2	32 (5S–FE)	ENGINE WIRE AND COWL WIRE (REAR SIDE OF RIGHT FRONT FENDER)
	34 (4A–FE)	
IG1	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)
IH1	36	ENGINE WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)
IJ1	36	COWL WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)
IJ2		
IQ3	36	COWL WIRE AND A/C NO. 2 WIRE (BESIDE HEATER UNIT)
IQ4		

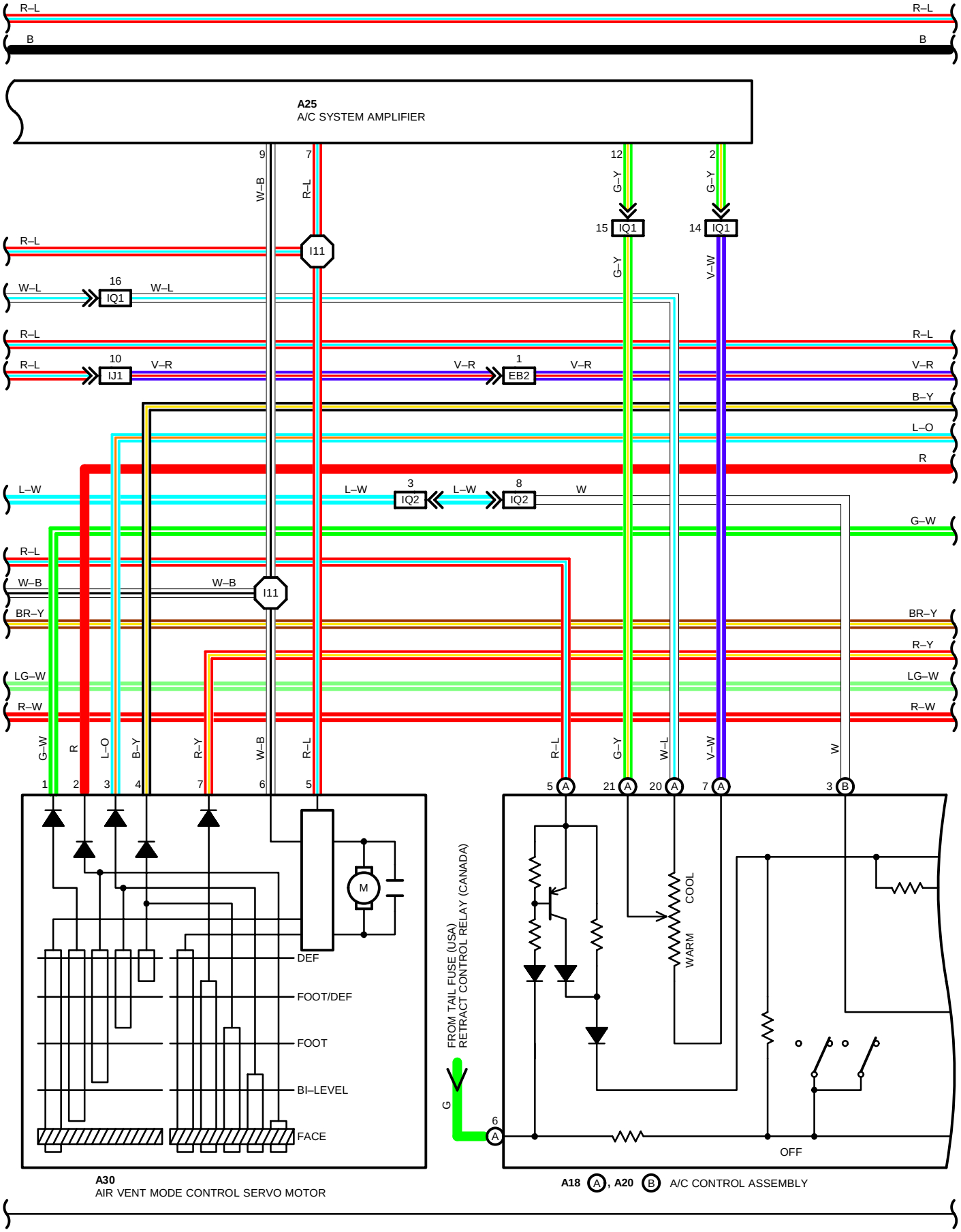
: GROUND POINTS

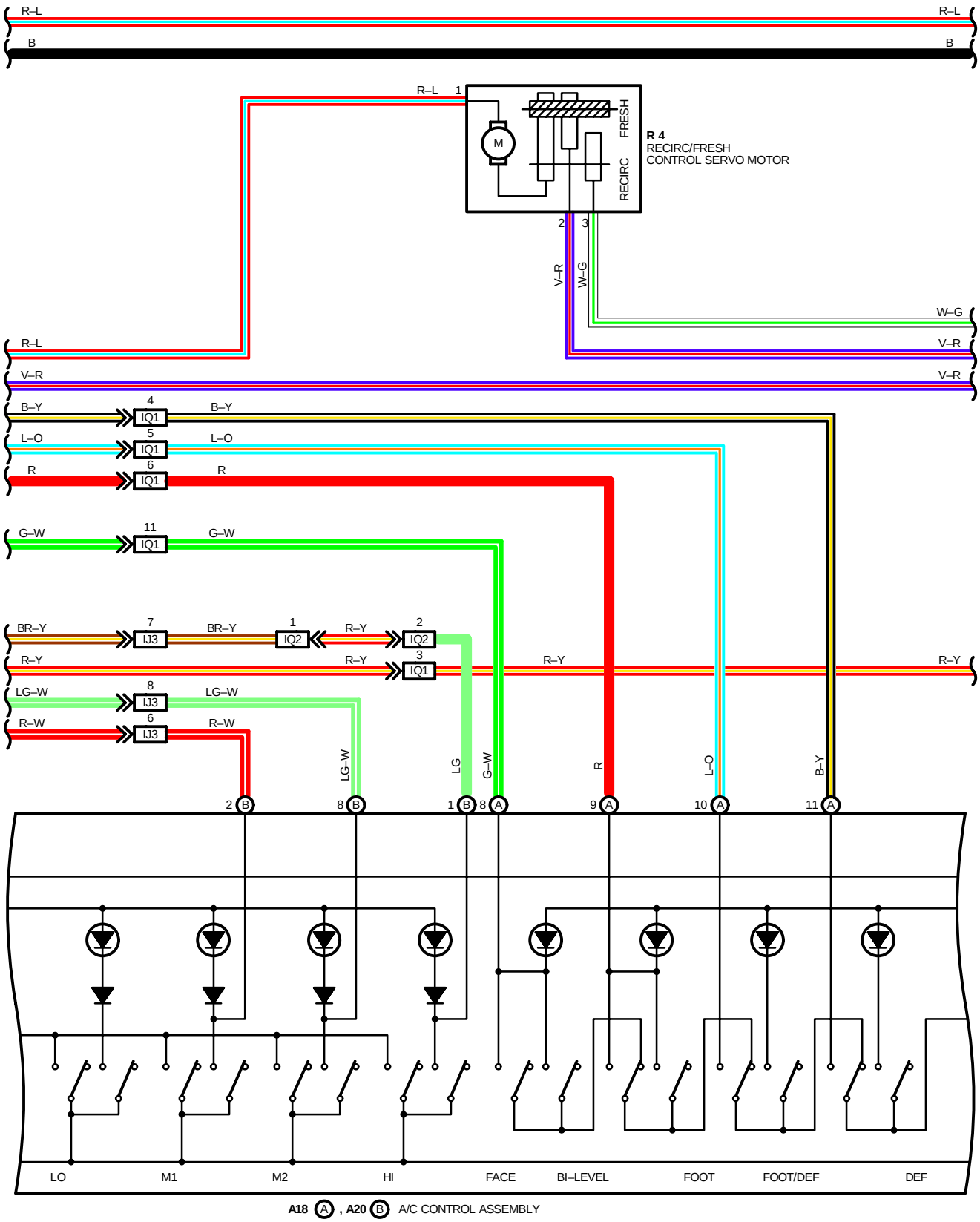
CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (5S–FE)	FRONT RIGHT FENDER
	34 (4A–FE)	
EB	32 (5S–FE)	FRONT LEFT FENDER
ID	36	LEFT KICK PANEL
IG	36	R/B NO. 4 SET BOLT

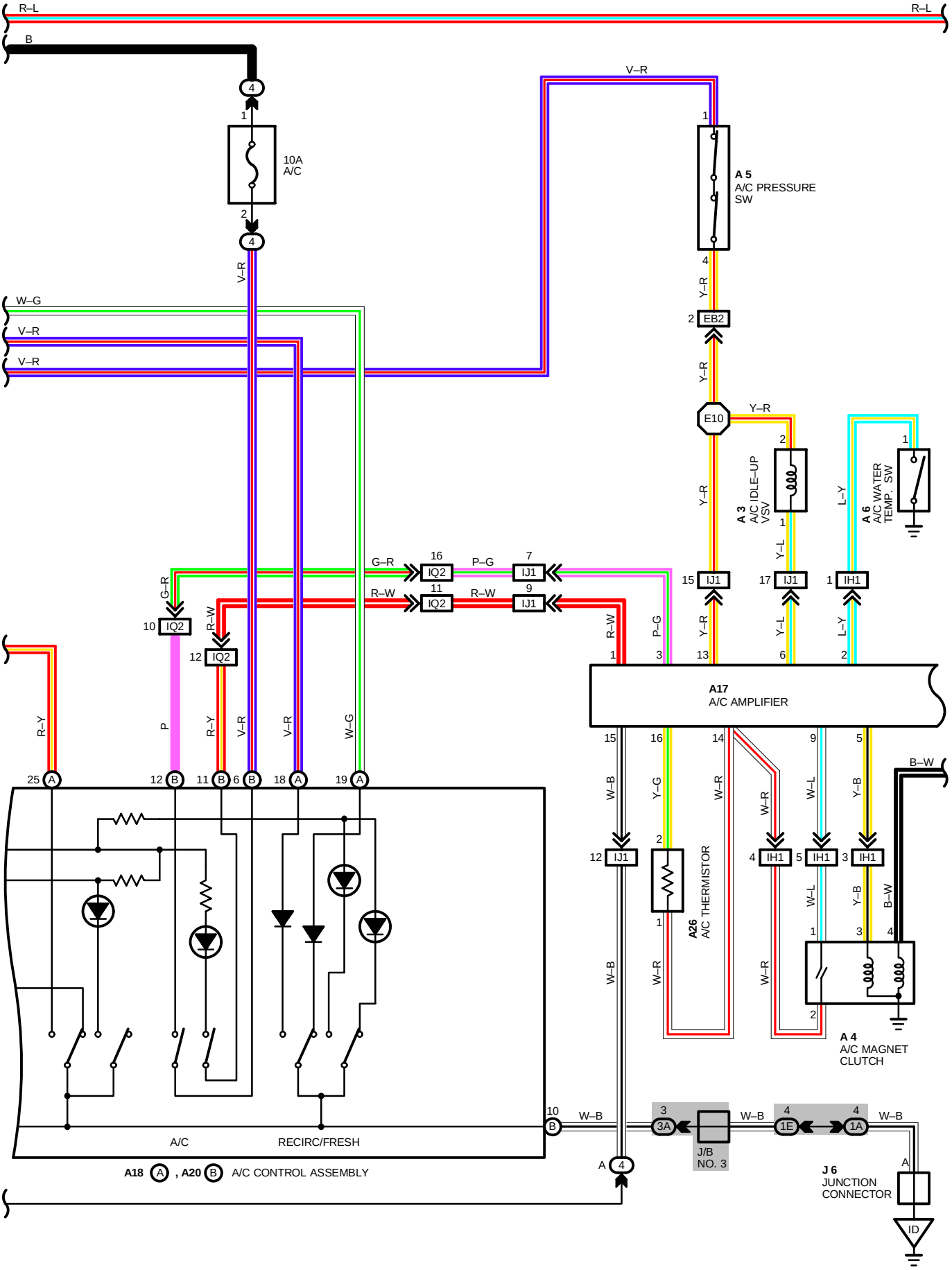
: SPLICE POINTS

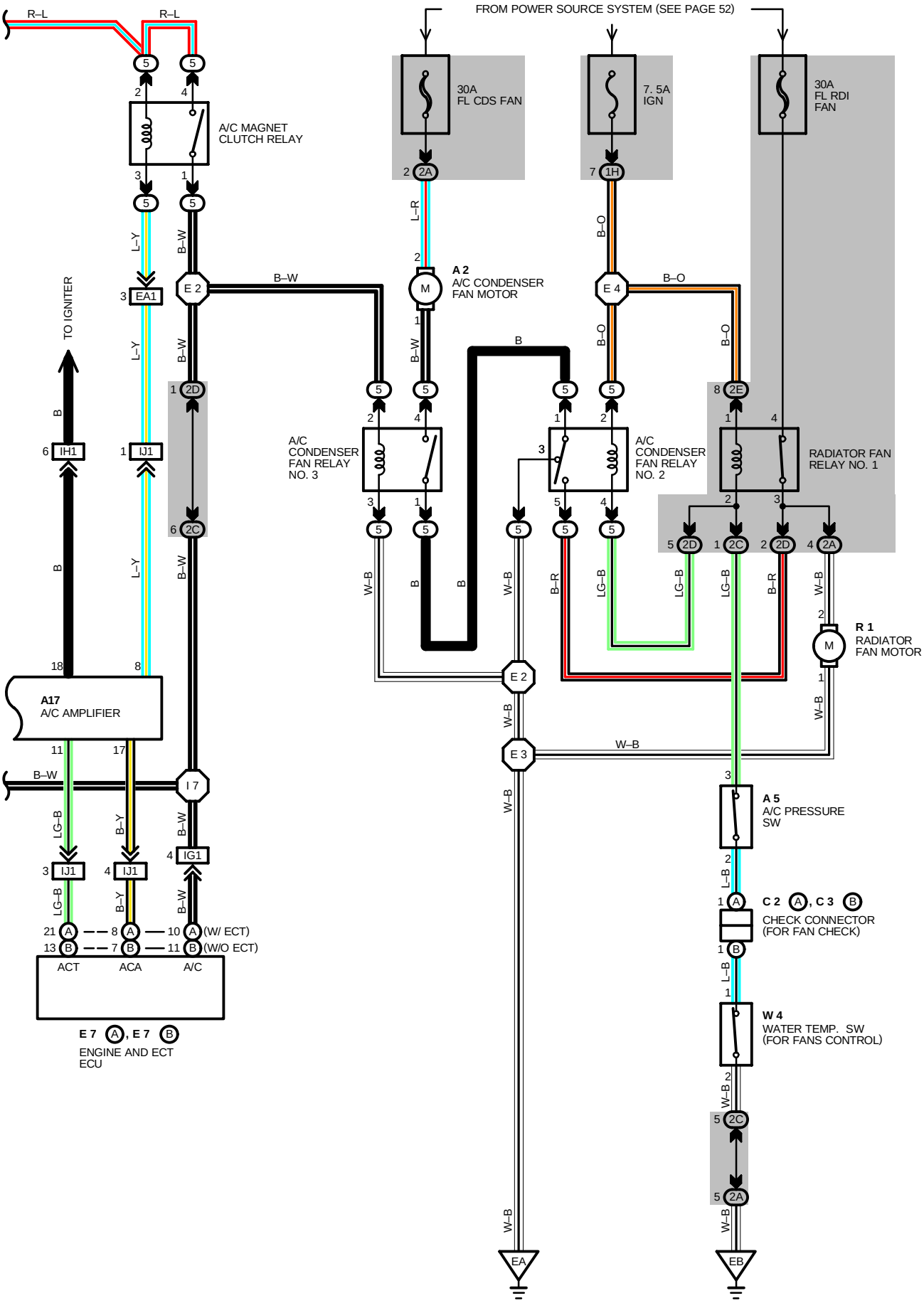
CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32 (5S–FE)	ENGINE ROOM MAIN WIRE	I 2	36	COWL WIRE
	34 (4A–FE)		I 3		
E 3	32 (5S–FE)		I 4		
	34 (4A–FE)		I 7	36	ENGINE WIRE
E 4	32 (5S–FE)		I 8	36	COWL WIRE
	34 (4A–FE)		I11	36	A/C NO. 2 WIRE
E10	32 (5S–FE)	COWL WIRE	I12	36	A/C NO. 1 WIRE
	34 (4A–FE)				


FROM POWER SOURCE SYSTEM (SEE PAGE 52)
40A HEATER
15A GAUGE
J/B NO. 3
HEATER RELAY
J 4 JUNCTION CONNECTOR
J 5 JUNCTION CONNECTOR
B 4 BLOWER MOTOR
B 3 BLOWER CONTROL RELAY
B 6 BLOWER RESISTOR
A25 A/C SYSTEM AMPLIFIER
A29 AIR MIX CONTROL SERVO MOTOR
COOL
WARM
IG


R–L
B
A25
A/C SYSTEM AMPLIFIER
W–B
R–L
G–Y
V–W
I11
IQ1
IJ1
IQ2
EB2
W–L
V–R
L–W
L–O
R
B–Y
G–W
BR–Y
R–Y
LG–W
R–W
W
G–W
R
L–O
B–Y
R–Y
W–B
R–L
G–Y
W–L
V–W
W
DEF
FOOT/DEF
FOOT
BI–LEVEL
FACE
M
FROM TAIL FUSE (USA)
RETRACT CONTROL RELAY (CANADA)
G
COOL
WARM
OFF
A30
AIR VENT MODE CONTROL SERVO MOTOR
A18 A, A20 B A/C CONTROL ASSEMBLY


R–L
B
R 4
RECIRC/FRESH
CONTROL SERVO MOTOR
FRESH
RECIRC
M
V–R
W–G
B–Y
L–O
R
G–W
BR–Y
R–Y
LG–W
R–W
IQ1
IQ2
IJ3
LG
G–W
R
L–O
B–Y
LO
M1
M2
HI
FACE
BI–LEVEL
FOOT
FOOT/DEF
DEF
A18 (A) , A20 (B) A/C CONTROL ASSEMBLY

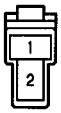

R–L
R–L
B
4
1
10A
A/C
2
4
V–R
V–R
W–G
V–R
V–R
1
A 5
A/C PRESSURE
SW
4
Y–R
2
EB2
Y–R
E10
Y–R
Y–R
2
A 3
A/C IDLE–UP
VSV
1
Y–L
L–Y
1
A 6
A/C WATER
TEMP. SW
G–R
16
IQ2
P–G
7
IJ1
R–W
11
IQ2
R–W
9
IJ1
G–R
10
IQ2
R–W
12
IQ2
15
IJ1
17
IJ1
1
IH1
Y–R
Y–L
L–Y
R–W
P–G
1
3
13
6
2
A17
A/C AMPLIFIER
R–Y
P
R–Y
V–R
V–R
W–G
25
A
12
B
11
B
6
B
18
A
19
A
15
16
14
9
5
B–W
W–B
Y–G
W–R
W–R
W–L
Y–B
12
IJ1
2
4
IH1
5
IH1
3
IH1
1
A26
A/C THERMISTOR
W–L
Y–B
B–W
W–B
W–R
W–R
1
3
4
2
A 4
A/C MAGNET
CLUTCH
A/C
RECIRC/FRESH
A18 A , A20 B A/C CONTROL ASSEMBLY
10
B
W–B
3
3A
J/B
NO. 3
W–B
4
1E
4
1A
W–B
A
4
A
J 6
JUNCTION
CONNECTOR
ID


FROM POWER SOURCE SYSTEM (SEE PAGE 52)
30A
FL CDS FAN
7. 5A
IGN
30A
FL RDI
FAN
A/C MAGNET
CLUTCH RELAY
TO IGNITER
A 2
A/C CONDENSER
FAN MOTOR
A/C
CONDENSER
FAN RELAY
NO. 3
A/C
CONDENSER
FAN RELAY
NO. 2
RADIATOR FAN
RELAY NO. 1
R 1
RADIATOR
FAN MOTOR
A17
A/C AMPLIFIER
A 5
A/C PRESSURE
SW
C 2 A, C 3 B
CHECK CONNECTOR
(FOR FAN CHECK)
W 4
WATER TEMP. SW
(FOR FANS CONTROL)
(W/ ECT)
(W/O ECT)
ACT
ACA
A/C
E 7 A, E 7 B
ENGINE AND ECT
ECU
EA
EB

A 2 BLACK



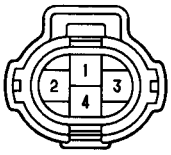
A 3 BLACK



A 4 GRAY



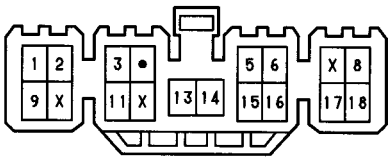
A 5 BLACK



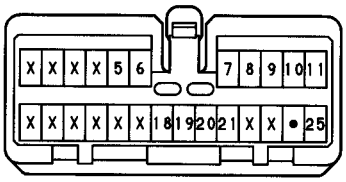
A 6



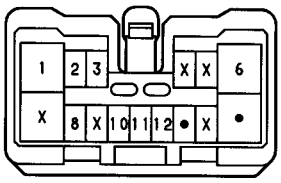
A17



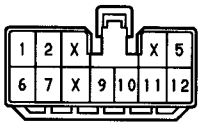
A18 (A)



A20 (B)



A25



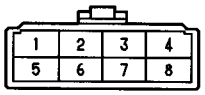
A29



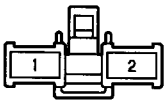
A30



B 3 BLACK



B 4 BLACK



B 6 BLACK



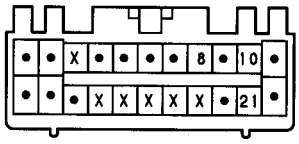
C 2 DARK GRAY



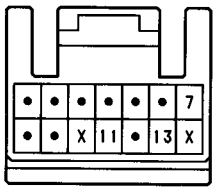
C 3 DARK GRAY



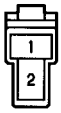
E 7 (A) DARK GRAY



E 7 (B) DARK GRAY



I 6

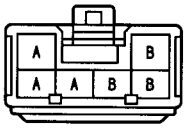


J 4



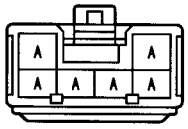
(HINT:SEE PAGE 7)

J 5



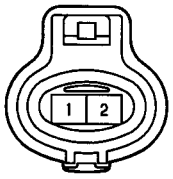
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J 6

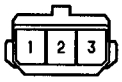


(HINT:SEE PAGE 7)

R 1 GRAY



R 4



W 4 GRAY



SYSTEM OUTLINE

1. COOLING FAN OPERATION

WHEN THE IGNITION SW IS TURNED ON, THE CURRENT FROM IGN FUSE FLOWS TO **TERMINAL 3** OF RADIATOR FAN RELAY NO. 1 → **TERMINAL 4** → **TERMINAL 3** OF THE A/C PRESSURE SW → **TERMINAL 2** → **TERMINAL 1** OF WATER TEMP. SW (FOR FANS CONTROL) → **TERMINAL 2** (5S–FE) → **GROUND,** FROM **TERMINAL 2** OF A/C FAN RELAY NO. 2 → **TERMINAL 4** → **TERMINAL 3** OF A/C PRESSURE SW → **TERMINAL 2** → **TERMINAL 1** OF WATER TEMP. SW (FOR FANS CONTROL) → **TERMINAL 2** (5S–FE) → **GROUND,** CAUSING RELAY NO. 1 AND RELAY NO. 2 OF EACH FAN TO TURN ON.

***** OPERATION AT LOW SPEED

WHEN THE A/C SW (A/C CONTROL ASSEMBLY) IS TURNED ON AND THE AIR CONDITIONER OPERATES, THE CURRENT FLOWS FROM GAUGE FUSE FLOWS TO **TERMINAL 2** OF A/C MAGNET CLUTCH RELAY → **TERMINAL 3** → **TERMINAL 8** OF A/C AMPLIFIER CAUSING A/C MAGNET CLUTCH RELAY TO TURN ON.

AT THAT TIME, THE CURRENT FROM GAUGE FUSE FLOWS TO **TERMINAL 4** OF A/C MAGNET CLUTCH RELAY → **TERMINAL 1** → **TERMINAL 4** OF A/C MAGNET CLUTCH → **GROUND**, AND FROM **TERMINAL 1** OF A/C MAGNET CLUTCH RELAY → **TERMINAL 2** OF A/C FAN RELAY NO. 3 → **TERMINAL 3** → **GROUND**.

AS A RESULT, A/C MAGNET CLUTCH AND A/C FAN RELAY NO. 3 TURNS ON AND THE CURRENT FLOWS FROM FL CDS FAN → **TERMINAL 2** OF A/C CONDENSER FAN MOTOR → **TERMINAL 1** → **TERMINAL 4** OF A/C FAN RELAY NO. 3 → **TERMINAL 1** → **TERMINAL 1** OF A/C FAN RELAY NO. 2 → **TERMINAL 5** → **TERMINAL 2** OF A/C CONDENSOR FAN MOTOR → **TERMINAL 1** → **GROUND**, FLOWING TO EACH FAN MOTOR IN SERIES, CAUSING THE COOLING FAN TO ROTATE AT LOW SPEED.

***** OPERATION AT HIGH SPEED

DURING A/C OPERATION, WHEN THE PRESSURE OF A/C COMPRESSOR BECOMES HIGHER THAN NORMAL PRESSURE (MORE THAN **14.3** KG/CM^2 **1401** KPA, **203** PSI), THE A/C PRESSURE SW TURNS OFF.

AS A RESULT, FAN RELAY NO. 1 AND NO. 2 TURNS OFF AND THE CURRENT FLOWS FROM FL RDI FAN → **TERMINAL 1** OF RADIATOR FAN RELAY NO. 1 → **TERMINAL 2** → **TERMINAL 2** OF RADIATOR FAN MOTOR → **TERMINAL 1** → **GROUND,** AND FROM FL CDS FAN → **TERMINAL 2** OF A/C CONDENSER FAN MOTOR → **TERMINAL 1** → **TERMINAL 4** OF A/C FAN RELAY NO. 3 → **TERMINAL 1** → **TERMINAL 1** OF A/C FAN RELAY NO. 2 → **TERMINAL 3** → **GROUND**, FLOWING TO EACH FAN MOTOR IN PARALLEL CAUSING THE → COOLING FAN TO ROTATE AT HIGH SPEED. WHEN THE ENGINE COOLANT TEMPERATURE BECOMES MORE THAN ABOUT **90**˚C (**194**˚F), THE WATER TEMP. SW TURNS OFF AND THE SAME OPERATION AS ABOVE IS PERFORMED.

2. HEATER BLOWER MOTOR OPERATION PUSH TYPE BLOWER CONTROL SW (W/O AUTO A/C)

CURRENT IS APPLIED AT ALL TIMES THROUGH THE HEATER FUSE TO **TERMINAL 5** OF HEATER RELAY. WHEN THE IGNITION SW IS TURNED ON, CURRENT FLOWS THROUGH GAUGE FUSE TO **TERMINAL 3** OF HEATER RELAY → **TERMINAL 1** → **TERMINAL C3** OF A/C CONTROL ASSEMBLY.

AT THE SAME TIME, CURRENT ALSO FLOWS FROM GAUGE FUSE TO **TERMINAL 5** OF A/C BLOWER CONTROL RELAY → **TERMINAL 7** → **TERMINAL C1** OF A/C CONTROL ASSEMBLY, FROM **TERMINAL 5** OF BLOWER CONTROL RELAY → **TERMINAL 8** → **TERMINAL C8** OF A/C CONTROL ASSEMBLY, AND ALSO FROM **TERMINAL 5** OF BLOWER CONTROL ASSEMBLY.

***** LOW SPEED OPERATION (OPERATION AT MANUAL)

WHEN THE BLOWER SW (A/C CONTROL ASSEMBLY) IS MOVED TO **LOW** POSITION, CURRENT FLOWS FROM **TERMINAL C3** OF A/C CONTROL ASSEMBLY FLOWS TO **TERMINAL C10** OF A/C CONTROL ASSEMBLY → **GROUND** AND TURNS THE HEATER RELAY ON.

THIS CAUSES THE CURRENT FLOWING FROM THE HEATER FUSE TO **TERMINAL 5** OF THE HEATER RELAY TO FLOW TO **TERMINAL 4** OF HEATER RELAY → **TERMINAL 4** → **GROUND,** CAUSING THE BLOWER MOTOR TO ROTATE AT LOW SPEED.

***** HIGH SPEED OPERATION (OPERATION AT MANUAL)

WHEN THE BLOWER SW (A/C CONTROL ASSEMBLY) IS MOVED TO **HI** POSITION, CURRENT FLOWS FROM **TERMINAL C3** OF A/C CONTROL ASSEMBLY → **TERMINAL C10** OF A/C CONTROL ASSEMBLY → **GROUND** AND TURNS THE HEATER RELAY ON.

AS A RESULT, THE CURRENT FLOWING TO **TERMINAL C1** OF THE A/C CONTROL ASSEMBLY FLOWS TO **TERMINAL C10** OF A/C CONTROL ASSEMBLY → **GROUND,** TURNING THE A/C BLOWER CONTROL RELAY ON.

THIS CASE IS THE CURRENT FLOWING FROM THE HEATER FUSE → **TERMINAL 5** OF THE HEATER RELAY TO FLOW TO **TERMINAL 4** OF RELAY → **TERMINAL 2** OF BLOWER MOTOR → **TERMINAL 1** → **TERMINAL 4** OF BLOWER CONTROL RELAY → **TERMINAL 3** → **GROUND,** CAUSING THE BLOWER MOTOR TO ROTATE AT HIGH SPEED.

***** MEDIUM SPEED OPERATION (OPERATION AT MANUAL M1, M2)

WHEN THE BLOWER SW (A/C CONTROL ASSEMBLY) IS MOVED TO **M1** POSITION. CURRENT FLOWS FROM **TERMINAL C3** OF A/C CONTROL ASSEMBLY TO **TERMINAL C10** OF A/C CONTROL ASSEMBLY → **GROUND** AND TURNS THE HEATER RELAY ON.

AS A RESULT, CURRENT FLOWING TO **TERMINAL C2** OF THE A/C CONTROL ASSEMBLY FLOWS TO **TERMINAL C10** OF THE A/C CONTROL ASSEMBLY → **GROUND,** TURNING THE BLOWER CONTROL RELAY ON SO THAT THE CURRENT FLOWING FROM THE HEATER FUSE TO **TERMINAL 5** OF THE HEATER RELAY FLOWS TO **TERMINAL 4** OF HEATER RELAY → **TERMINAL 2** OF BLOWER MOTOR → **TERMINAL 1** → **TERMINAL 1** OF BLOWER RESISTOR → **TERMINAL 2** → **TERMINAL 7** OF BLOWER CONTROL RELAY → **TERMINAL 3** → **GROUND,** CAUSING THE BLOWER MOTOR TO ROTATE AT MEDIUM SPEED.

WHEN THE BLOWER SW (A/C CONTROL ASSEMBLY) IS MOVED TO **M2** POSITION, CURRENT FLOWS FROM **TERMINAL 1** OF BLOWER MOTOR → **TERMINAL 1** OF BLOWER RESISTOR → **TERMINAL 3**→ **TERMINAL 2** OF BLOWER CONTROL RELAY → **TERMINAL 3** → **GROUND.**

THIS CURRENT FLOW FROM BLOWER MOTOR TO GROUND IS GREATER THAN AT **M1** POSITION, SO THE BLOWER MOTOR ROTATES AT MEDIUM HIGH SPEED.

3. OPERATION OF RECIRC/FRESH CONTROL SERVO MOTOR

(SWITCHING FROM FRESH TO RECIRC)

WITH IGNITION SW TURNED ON, THE CURRENT FLOWS FROM GAUGE FUSE TO **TERMINAL 1** OF RECIRC/FRESH CONTROL SERVO MOTOR. WHEN THE RECIRC/FRESH SW IS SWITCHED TO THE RECIRC SIDE, THE CURRENT FLOWS FROM **TERMINAL 1** OF RECIRC/FRESH CONTROL SERVO MOTOR → **TERMINAL 2** → **TERMINAL A18** OF RECIRC/FRESH CONTROL SERVO MOTOR → **TERMINAL C10** → **GROUND**, THE MOTOR ROTATES AND THE DAMPER MOVES TO THE RECIRC SIDE.

WHEN IT IS IN THE **RECIRC** POSITION, THE CURRENT IS CUT INSIDE THE SERVO MOTOR AND THE DAMPER STOPS AT THAT POSITION.

(SWITCHING FROM RECIRC TO FRESH)

WITH IGNITION SW ON, WHEN THE RECIRC/FRESH SW IS SWITCHED TO THE FRESH SIDE, THE CURRENT FLOWS FROM **TERMINAL 1** OF RECIRC/FRESH CONTROL SERVO MOTOR → **TERMINAL 3** → **TERMINAL C10** OF A/C CONTROL ASSEMBLY → **GROUND,** THE MOTOR ROTATES AND THE DAMPER MOVES TO THE FRESH SIDE. WHEN IT IS IN THE **FRESH** POSITION, THE CURRENT IS CUT INSIDE THE SERVO MOTOR AND THE DAMPER STOPS AT THAT POSITION.

SERVICE HINTS

A 4 A/C MAGNET CLUTCH
4–GROUND : APPROX. **3.7** Ω

A 5 A/C PRESSURE SW
3–2 : OPEN ABOVE APPROX. **13.5** KG/CM^2 (**192** PSI, **1323** KPA)
CLOSED BELOW APPROX. **10** KG/CM^2 (**142** PSI, **980** KPA)
1–4 : OPEN WITH PRESSURE LESS THAN **2.1** KG/CM^2 (**30** PSI, **206** KPA) OR ABOVE **27** KG/CM^2 (**384** PSI, **2648** KPA)

A17 A/C AMPLIFIER
8–15 : CONTINUITY WITH A/C SW (A/C CONTROL ASSEMBLY) ON AND IGNITION SW AT **ON** POSITION
14–15 : ALWAYS CONTINUITY
14–GROUND: ALWAYS CONTINUITY
15–GROUND: ALWAYS CONTINUITY
13–GROUND: APPROX. **12** VOLTS WITH IGNITION SW ON

A26 A/C THERMISTOR
1–2 : APPROX. **4852** Ω AT **0**˚C (**32**˚F)
APPROX. **2341** Ω AT **15**˚C (**59**˚F)
APPROX. **1500** Ω AT **25**˚C (**77**˚F)

A29 AIR MIX CONTROL SERVO MOTOR
2–GROUND : APPROX. **12** VOLTS WITH TEMPERATURE CONTROL VOLUME AT **WARM** TO **COOL** POSITION
6–GROUND : APPROX. **12** VOLTS WITH TEMPERATURE CONTROL VOLUME AT **COOL** TO **WARM** POSITION
1–3 : ALWAYS APPROX. **6** KΩ

B 3 BLOWER CONTROL RELAY
3–4 : CLOSED WITH BLOWER SW (A/C CONTROL ASSEMBLY) AT **HI** POSITION
1–3 : CLOSED WITH BLOWER SW (A/C CONTROL ASSEMBLY) AT **M1** POSITION
2–3 : CLOSED WITH BLOWER SW (A/C CONTROL ASSEMBLY) AT **M2** POSITION

B 6 BLOWER RESISTOR
1–3 : APPROX. **0.48** Ω
3–2 : APPROX. **0.94** Ω
2–4 : APPROX. **0.91** Ω

W 4 WATER TEMP. SW (FOR FANS CONTROL)
1–2 : OPEN ABOVE APPROX. **90**˚C (**194**˚F)
CLOSED BELOW APPROX. **83**˚C (**181.4**˚F)

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
A 2	26 (5S–FE)	A29	28	I 6	26 (5S–FE)
A 3	26 (5S–FE)	A30	28	J 4	29
A 4	26 (5S–FE)	B 3	28	J 5	29
A 5	26 (5S–FE)	B 4	28	J 6	29
A 6	26 (5S–FE)	B 6	28	R 1	26 (5S–FE)
A17	26 (5S–FE)	C 2	26 (5S–FE)	R 4	29
A18 A	28	C 3	26 (5S–FE)	W 4	26 (5S–FE)
A20 B	28	E 7 A	29		
A25	28	E 7 B	29		

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
4	24	R/B NO. 4 (RIGHT KICK PANEL)
5	24	R/B NO. 5 (ENGINE COMPARTMENT FRONT RIGHT)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2A	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2C	20	ENGINE WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2D	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2E		
3A	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

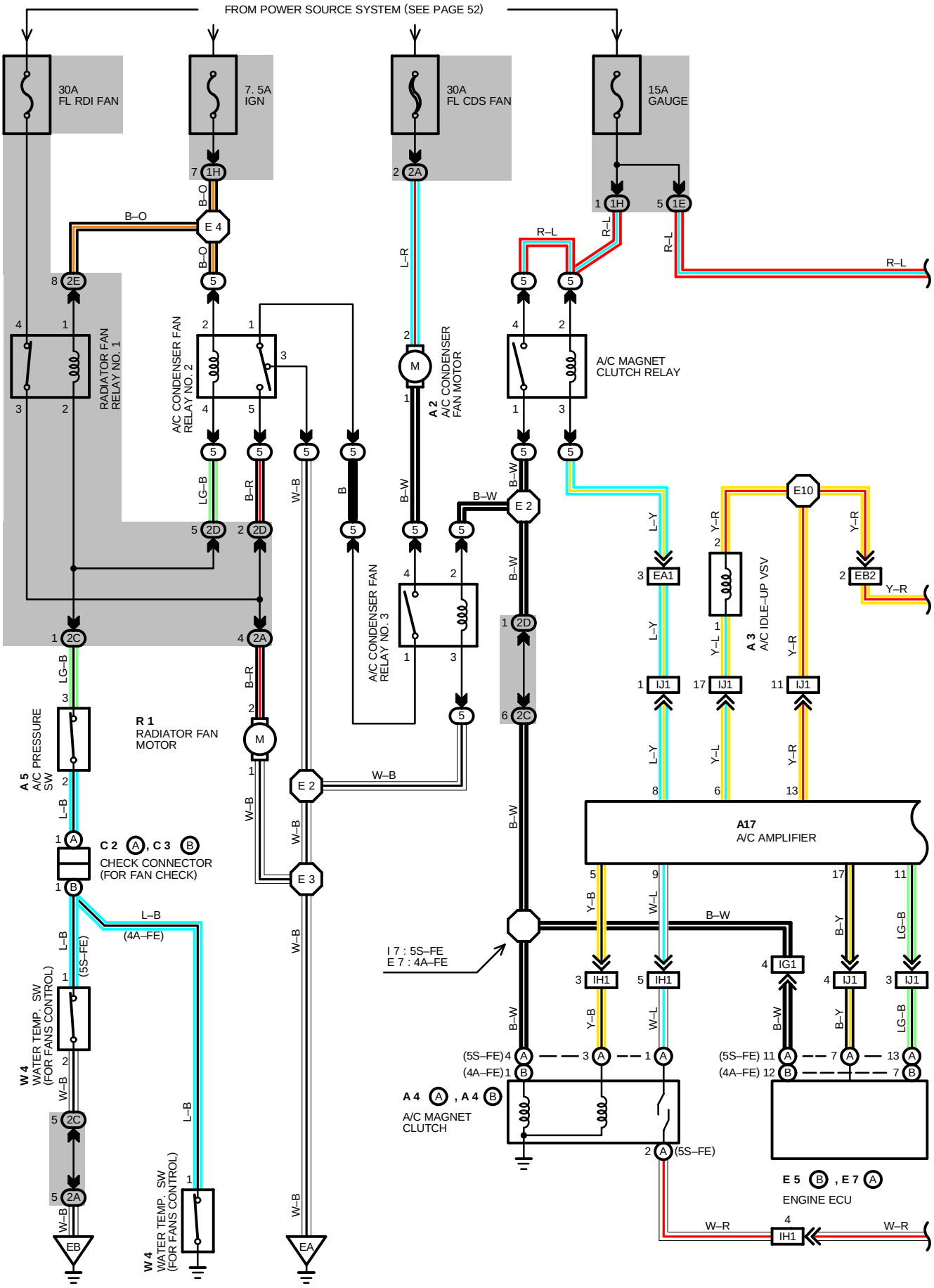
CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	32 (5S–FE) 34 (4A–FE)	COWL WIRE AND ENGINE ROOM MAIN WIRE (FRONT SIDE OF RIGHT FRONT FENDER)
EB2	32 (5S–FE) 34 (4A–FE)	ENGINE WIRE AND COWL WIRE (REAR SIDE OF RIGHT FRONT FENDER)
IG1	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)
IH1	36	ENGINE WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)
IJ1	36	COWL WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)
IQ1	36	COWL WIRE AND A/C NO. 2 WIRE (BESIDE HEATER UNIT)
IQ2		

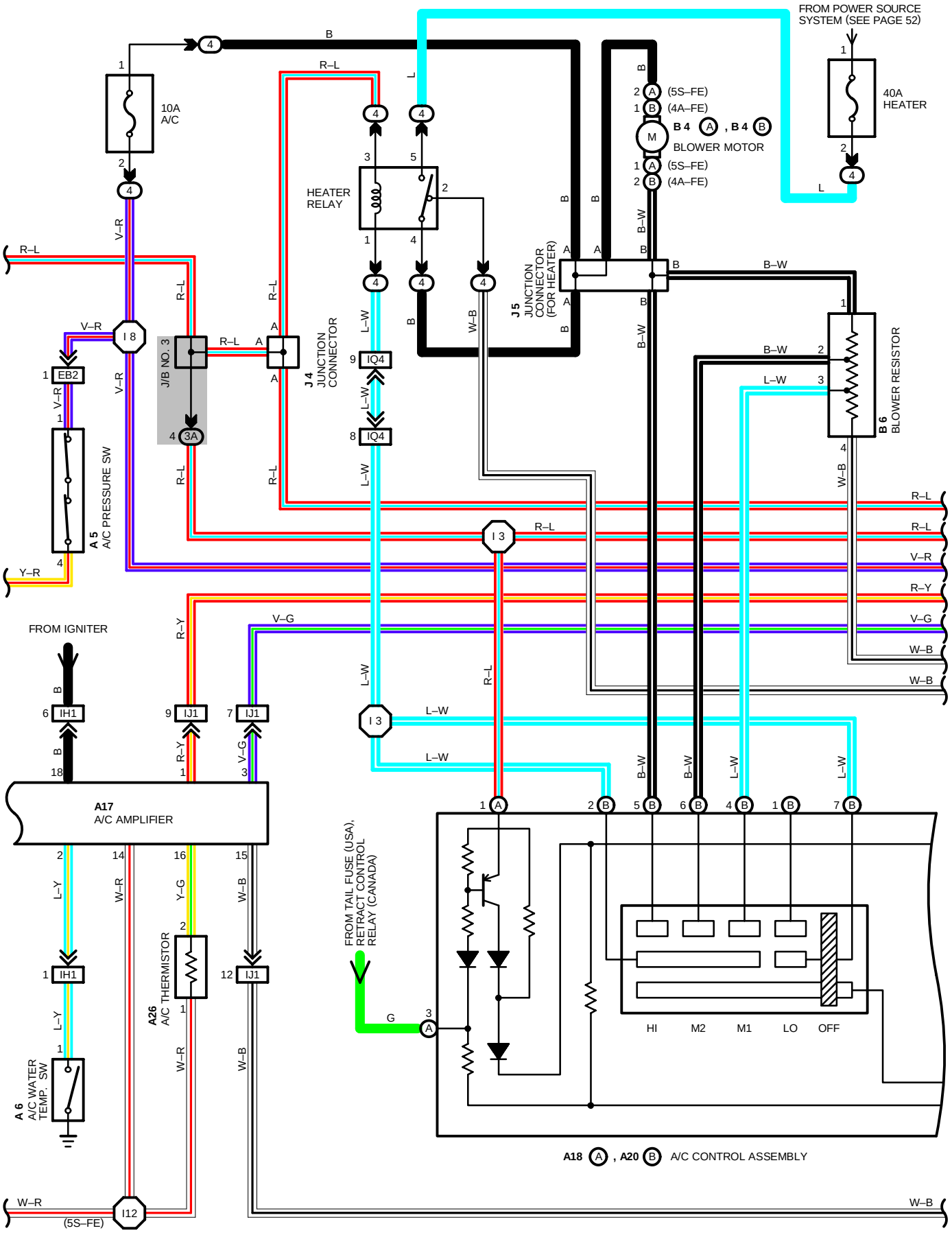
: GROUND POINTS

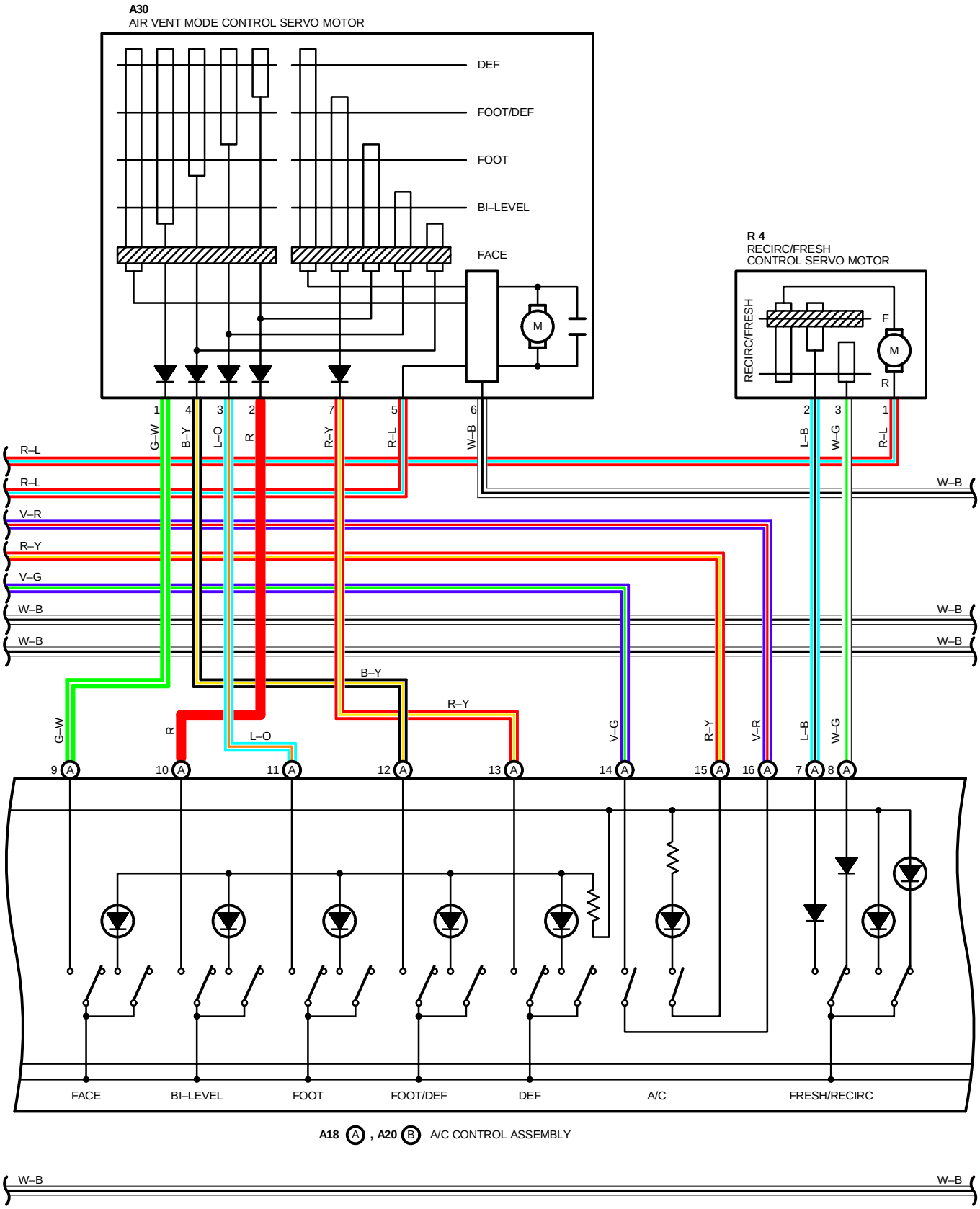
CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (5S–FE) 34 (4A–FE)	FRONT RIGHT FENDER
EB	32 (5S–FE) 34 (4A–FE)	FRONT LEFT FENDER
ID	36	LEFT KICK PANEL
IG	36	R/B NO. 4 SET BOLT

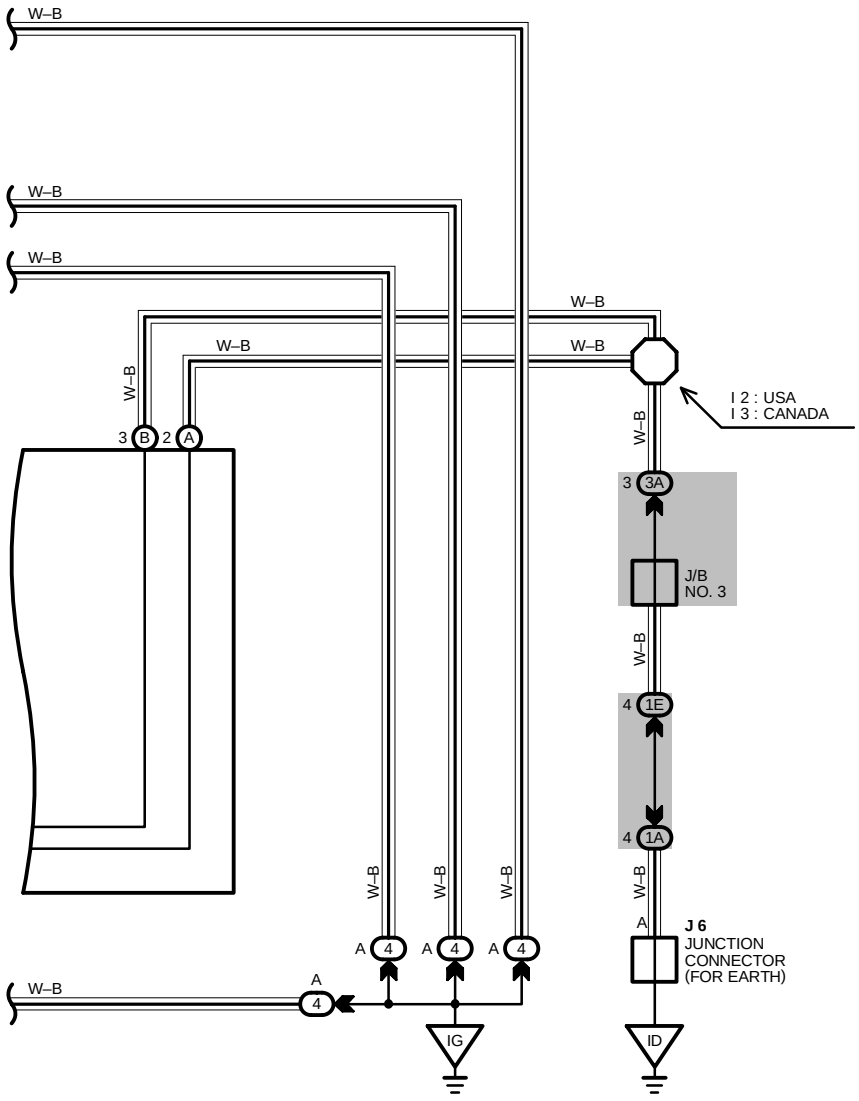
: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32 (5S–FE) 34 (4A–FE)	ENGINE ROOM MAIN WIRE	E10	32 (5S–FE) 34 (4A–FE)	COWL WIRE
E 3	32 (5S–FE) 34 (4A–FE)		I 3	36	
E 4	32 (5S–FE) 34 (4A–FE)		I 7	36	ENGINE WIRE
			I 8	36	COWL WIRE
			I11	36	A/C NO. 2 WIRE


FROM POWER SOURCE SYSTEM (SEE PAGE 52)
30A
FL RDI FAN
7. 5A
IGN
30A
FL CDS FAN
15A
GAUGE
RADIATOR FAN
RELAY NO. 1
A/C CONDENSER FAN
RELAY NO. 2
A/C CONDENSER
FAN MOTOR
A 2
A/C MAGNET
CLUTCH RELAY
A/C CONDENSER FAN
RELAY NO. 3
R 1
RADIATOR FAN
MOTOR
A 5
A/C PRESSURE
SW
C 2 , C 3
CHECK CONNECTOR
(FOR FAN CHECK)
W 4
WATER TEMP. SW
(FOR FANS CONTROL)
A 3
A/C IDLE–UP VSV
A17
A/C AMPLIFIER
I 7 : 5S–FE
E 7 : 4A–FE
A 4 , A 4
A/C MAGNET
CLUTCH
E 5 , E 7
ENGINE ECU
EB
EA
B–O
R–L
L–R
LG–B
B–R
W–B
B
B–W
L–Y
Y–R
Y–L
L–B
Y–B
W–L
B–Y
W–R
(5S–FE)
(4A–FE)


FROM POWER SOURCE SYSTEM (SEE PAGE 52)
10A A/C
40A HEATER
HEATER RELAY
B4 A , B4 B BLOWER MOTOR
(5S–FE)
(4A–FE)
J5 JUNCTION CONNECTOR (FOR HEATER)
J4 JUNCTION CONNECTOR
J/B NO. 3
B6 BLOWER RESISTOR
A5 A/C PRESSURE SW
FROM IGNITER
A17 A/C AMPLIFIER
A26 A/C THERMISTOR
A6 A/C WATER TEMP. SW
FROM TAIL FUSE (USA), RETRACT CONTROL RELAY (CANADA)
HI
M2
M1
LO
OFF
A18 A , A20 B A/C CONTROL ASSEMBLY
R–L
V–R
L–W
B–W
W–B
R–Y
V–G
L–Y
W–R
Y–G
Y–R
B
L
G


A30
AIR VENT MODE CONTROL SERVO MOTOR
DEF
FOOT/DEF
FOOT
BI–LEVEL
FACE
M
R 4
RECIRC/FRESH
CONTROL SERVO MOTOR
RECIRC/FRESH
F
M
R
1 4 3 2 7 5 6
G–W B–Y L–O R R–Y R–L W–B
2 3 1
L–B W–G R–L
R–L
R–L
V–R
R–Y
V–G
W–B
W–B
W–B
W–B
W–B
B–Y
R–Y
G–W
R
L–O
V–G
R–Y
V–R
L–B
W–G
9 A 10 A 11 A 12 A 13 A 14 A 15 A 16 A 7 A 8 A
FACE
BI–LEVEL
FOOT
FOOT/DEF
DEF
A/C
FRESH/RECIRC
A18 A , A20 B A/C CONTROL ASSEMBLY
W–B
W–B


W–B
W–B
W–B
W–B
W–B
W–B
W–B
3 B 2 A
I 2 : USA
I 3 : CANADA
W–B
3 3A
J/B
NO. 3
W–B
4 1E
4 1A
W–B
A
J 6
JUNCTION
CONNECTOR
(FOR EARTH)
W–B
W–B
W–B
A 4
A 4
A 4
W–B
A
4
IG
ID

SYSTEM OUTLINE

1. COOLING FAN OPERATION

WHEN THE IGNITION SW IS TURNED ON, THE CURRENT FROM IGN FUSE FLOWS TO **TERMINAL 3** OF RADIATOR FAN RELAY NO. 1 → **TERMINAL 4** → **TERMINAL 3** OF THE A/C PRESSURE SW → **TERMINAL 2** → **TERMINAL 1** OF WATER TEMP. SW (FOR FANS CONTROL) → **TERMINAL 2** (5S–FE) → **GROUND,** FROM **TERMINAL 2** OF A/C FAN RELAY NO. 2 → **TERMINAL 4** → **TERMINAL 3** OF A/C PRESSURE SW → **TERMINAL 2** → **TERMINAL 1** OF WATER TEMP. SW (FOR FANS CONTROL) → **TERMINAL 2** (5S–FE) → **GROUND,** CAUSING RELAY NO. 1 AND RELAY NO. 2 OF EACH FAN TO TURN ON.

***** OPERATION AT LOW SPEED

WHEN THE A/C SW (A/C CONTROL ASSEMBLY) IS TURNED ON AND THE AIR CONDITIONER OPERATES, THE CURRENT FLOWS FROM GAUGE FUSE FLOWS TO **TERMINAL 2** OF A/C MAGNET CLUTCH RELAY → **TERMINAL 3** → **TERMINAL 8** OF A/C AMPLIFIER CAUSING A/C MAGNET CLUTCH RELAY TO TURN ON.

AT THAT TIME, THE CURRENT FROM GAUGE FUSE FLOWS TO **TERMINAL 4** OF A/C MAGNET CLUTCH RELAY → **TERMINAL 1** → **TERMINAL 4** OF A/C MAGNET CLUTCH → **GROUND**, AND FROM **TERMINAL 1** OF A/C MAGNET CLUTCH RELAY → **TERMINAL 2** OF A/C FAN RELAY NO. 3 → **TERMINAL 3** → **GROUND**.

AS A RESULT, A/C MAGNET CLUTCH AND A/C FAN RELAY NO. 3 TURNS ON AND THE CURRENT FLOWS FROM FL CDS FAN → **TERMINAL 2** OF A/C CONDENSOR FAN MOTOR → **TERMINAL 1** → **TERMINAL 4** OF A/C FAN RELAY NO. 3 → **TERMINAL 1** → **TERMINAL 1** OF A/C FAN RELAY NO. 2 → **TERMINAL 5** → **TERMINAL 2** OF A/C CONDENSOR FAN MOTOR → **TERMINAL 1** → **GROUND**, FLOWING TO EACH FAN MOTOR IN SERIES, CAUSING THE COOLING FAN TO ROTATE AT LOW SPEED.

***** OPERATION AT HIGH SPEED

DURING A/C OPERATION, WHEN THE PRESSURE OF A/C COMPRESSOR BECOMES HIGHER THAN NORMAL PRESSURE (MORE THAN **14.3** KG/CM^2 **1401** KPA, **203** PSI), THE A/C PRESSURE SW TURNS OFF.

AS A RESULT, FAN RELAY NO. 1 AND NO. 2 TURNS OFF AND THE CURRENT FLOWS FROM FL RDI FAN → **TERMINAL 1** OF RADIATOR FAN RELAY NO. 1 → **TERMINAL 2** → **TERMINAL 2** OF RADIATOR FAN MOTOR → **TERMINAL 1** → **GROUND,** AND FROM FL CDS FAN → **TERMINAL 2** OF A/C CONDENSER FAN MOTOR → **TERMINAL 1** → **TERMINAL 4** OF A/C FAN RELAY NO. 3 → **TERMINAL 1** → **TERMINAL 1** OF A/C FAN RELAY NO. 2 → **TERMINAL 3** → **GROUND**, FLOWING TO EACH FAN MOTOR IN PARALLEL CAUSING THE COOLING FAN TO ROTATE AT HIGH SPEED. WHEN THE ENGINE COOLANT TEMPERATURE BECOMES MORE THAN ABOUT **90**˚C (**194**˚F), THE WATER TEMP. SW TURNS OFF AND THE SAME OPERATION AS ABOVE IS PERFORMED.

2. HEATER BLOWER MOTOR OPERATION (DIAL TYPE BLOWER (W/O AUTO A/C))

CURRENT IS APPLIED AT ALL TIMES THROUGH THE HEATERE FUSE TO **TERMINAL 5** OF HEATER RELAY. WHEN THE IGNITION SW IS TURNED ON, CURRENT FLOWS THROUGH GAUGE FUSE TO **TERMINAL 3** OF HEATER RELAY → **TERMINAL 1** → **TERMINAL B2** AND **TERMINAL B7** OF A/C CONTROL ASSEMBLY.

***** LOW SPEED OPERATION

WHEN THE BLOWER SW (A/C CONTROL ASSEMBLY) IS MOVED TO **LOW** POSITION. THE CURRENT FLOWING TO **TERMINAL B7** OF THE A/C CONTROL ASSEMBLY FLOWS TO **TERMINAL B3** OF A/C CONTROL ASSEMBLY → **GROUND** AND TURNS THE HEATER RELAY ON.

AS A RESULT, THE CURRENT TO **TERMINAL 5** OF THE HEATER RELAY FLOWS TO **TERMINAL 4** OF HEATER RELAY → **TERMINAL 2** (5S–FE), **TERMINAL 1** (4A–FE) OF BLOWER MOTOR → MOTOR → **TERMINAL 1** (5S–FE), **TERMINAL 2** (4A–FE) → **TERMINAL 1** OF BLOWER RESISTOR → **TERMINAL 4** → **GROUND,** CAUSING THE BLOWER MOTOR TO ROTATE AT LOW SPEED.

***** HIGH SPEED OPERATION

WHEN THE BLOWER SW (A/C CONTROL ASSEMBLY) IS MOVED TO **HI** POSITION, THE CURRENT TO **TERMINAL B2** OF A/C CONTROL ASSEMBLY FLOWS TO **TERMINAL B3** OF A/C CONTROL ASSEMBLY → **GROUND** AND TURNS THE HEATER RELAY ON.

AS A RESULT, THE CURRENT TO **TERMINAL B5** OF BLOWER MOTOR → **TERMINAL 1** → **TERMINAL 2** (5S–FE) OR **TERMINAL 1** (4A–FE) OF BLOWER MOTOR → **TERMINAL 1** (5S–FE) OR **TERMINAL 2** (4A–FE) → **TERMINAL B5** OF A/C CONTROL ASSEMBLY → **TERMINAL B3** → **GROUND,** AND CAUSES THE BLOWER MOTOR TO ROTATE AT HIGH SPEED.

***** MEDIUM SPEED OPERATION (OPERATION AT MANUAL M1, M2)

WHEN THE BLOWER SW (A/C CONTROL ASSEMBLY) IS MOVED TO **M1** POSITION, THE CURRENT FLOWING TO **TERMINAL 3** OF HEATER RELAY FLOWS TO **TERMINAL 1** OF RELAY → **TERMINAL B2** OF A/C CONTROL ASSEMBLY → **TERMINAL B3** → **GROUND** AND TURNS THE HEATER RELAY ON.

AS A RESULT, CURRENT FROM THE HEATER FUSE TO **TERMINAL 5** OF HEATER RELAY FLOWS TO **TERMINAL 4** OF HEATER RELAY → **TERMINAL 2** (5S–FE) OR **TERMINAL 1** (4A–FE) OF BLOWER MOTOR → **TERMINAL 1** → **TERMINAL 1** (5S–FE) OR **TERMINAL 2** (4A–FE) → **TERMINAL 1** OF BLOWER RESISTOR → **TERMINAL 2** → **TERMINAL B6** OF A/C CONTROL ASSEMBLY → **TERMINAL B3** → **GROUND,** CAUSING THE BLOWER MOTOR TO ROTATE AT MEDIUM LOW SPEED.

WHEN THE BLOWER SW (A/C CONTROL ASSEMBLY) IS MOVED TO **M2** POSITION. THE CURRENT TO **TERMINAL 5** OF HEATER RELAY FLOWS TO **TERMINAL 4** OF HEATER RELAY → **TERMINAL 2** (5S–FE) OR **TERMINAL 2** (4A–FE) OF BLOWER MOTOR → **TERMINAL 1** → **TERMINAL 1** (5S–FE) OR **TERMINAL 2** (4A–FE) → **TERMINAL 1** OF BLOWER RESISTOR → **TERMINAL 3**→ **TERMINAL B4** OF A/C CONTROL ASSEMBLY → **TERMINAL 3** → **GROUND.**

AS THE CURRENT FLOW FROM BLOWER MOTOR TO GROUND IS GREATER THAN FOR M1. THE BLOWER MOTOR ROTATES AT HIGH SPEED.

3. OPERATION OF RECIRC/FRESH CONTROL SERVO MOTOR

(SWITCHING FROM FRESH TO RECIRC)

WITH IGNITION SW TURNED ON, THE CURRENT FLOWS FROM GAUGE FUSE TO **TERMINAL 1** OF RECIRC/FRESH CONTROL SERVO MOTOR. WHEN THE RECIRC/FRESH SW IS SWITCHED TO THE RECIRC SIDE, TO CURRENT FLOWS FROM **TERMINAL 1** OF RECIRC/FRESH CONTROL SERVO MOTOR → **TERMINAL 2** → **TERMINAL A7** OF RECIRC/FRESH CONTROL SERVO MOTOR → **TERMINAL A2** → **GROUND**, THE MOTOR ROTATES AND THE DAMPER MOVES TO THE RECIRC SIDE.

WHEN IT IS IN THE **RECIRC** POSITION, THE CURRENT IS CUT INSIDE THE SERVO MOTOR AND THE DAMPER STOPS AT THAT POSITION.

(SWITCHING FROM RECIRC TO FRESH)

WITH IGNITION SW ON, WHEN THE RECIRC/FRESH SW IS SWITCHED TO THE FRESH SIDE, THE CURRENT FLOWS FROM **TERMINAL 1** OF RECIRC/FRESH CONTROL SERVO MOTOR → **TERMINAL 3** → **TERMINAL A8** OF A/C CONTROL ASSEMBLY → **TERMINAL A2** → **GROUND,** THE MOTOR ROTATES AND THE DAMPER MOVES TO THE FRESH SIDE. WHEN IT IS IN THE **FRESH** POSITION, THE CURRENT IS CUT INSIDE THE SERVO MOTOR AND THE DAMPER STOPS AT THAT POSITION.

4. OPERATION OF AIR VENT MODE CONTROL SERVO MOTOR

WITH IGNITION SW TURNED ON, THE CURRENT FLOWS FROM GAUGE FUSE TO **TERMINAL 5** OF AIR VENT MODE CONTROL SERVO MOTOR → **TERMINAL 6** → **GROUND,** AND THE DAMPER MOVES TO THE POSITION OF THE MODE SELECTION SW OF THE CONTROL ASSEMBLY SWITCH IS ON.

WHEN THE MODE SELECTION SW OF A/C CONTROL ASSEMBLY IS MOVED TO **DEF** POSITION FROM THE DAMPER IN THE **FACE** POSITION, THE CURRENT FLOWS FROM **TERMINAL 7** OF AIR VENT MODE CONTROL SERVO MOTOR TO **TERMINAL A25** OF A/C CONTROL ASSEMBLY → **TERMINAL C10** → **GROUND.**

AS A RESULT, TO SERVO MOTOR OPERATES UNTIL THE DAMPER REACHES **DEF** POSITION.

WHEN THIS OCCURS THE CURRENT TO THE A/C CONTROL ASSEMBLY IS SHUT OFF AND ROTATION OF THE MOTOR STOPS. SWITCHING TO OTHER MODES IS CONTROLLED BY THE SERVO MOTOR ACCORDING THE FLOWING CURRENT:

1. **FOOT/DEF** POSITION: THE CURRENT FLOWS FROM **TERMINAL 4** OF SERVO MOTOR TO **TERMINAL A11** OF A/C CONTROL ASSEMBLY.
2. **FOOT** POSITION: THE CURRENT FLOWS FROM **TERMINAL 3** OF SERVO MOTOR TO **TERMINAL A10** OF A/C CONTROL ASSEMBLY.
3. **BI–LEVEL** POSITION: THE CURRENT FLOWS FROM **TERMINAL 2** OF SERVO MOTOR TO **TERMINAL A9** OF A/C CONTROL ASSEMBLY.

5. AIR CONDITIONER OPERATION

THE A/C AMPLIFIER RECEIVES VARIOUS SIGNALS, THE ENGINE RPM SIGNAL FROM THE IGNITER, OUTLET TEMPERATURE SIGNAL FROM THE A/C THERMISTOR, COOLANT TEMPERATURE FROM THE WATER TEMP. SENSOR, AND THE LOCK SIGNAL FROM THE A/C COMPRESSOR, ETC.

WHEN THE ENGINE IS STARTED AND THE A/C SW (A/C CONTROL ASSEMBLY) IS TURNED ON, THE CURRENT FLOWS FROM A/C FUSE TO **TERMINAL 3** OF A/C AMPLIFIER.

AS A RESULT, THE CURRENT FLOWING FROM **TERMINAL 3** OF A/C MAGNET CLUTCH RELAY TO **TERMINAL 8** OF A/C AMPLIFIER FLOWS FROM **TERMINAL 15** OF A/C AMPLIFIER TO GROUND AND TURNS IN THE MAGNET CLUTCH RELAY.

BECAUSE THE MAGNET CLUTCH IS ON, THE A/C COMPRESSOR OPERATES, CAUSING THE CURRENT FLOWING FROM A/C IDLE–UP VSV TO **TERMINAL 6** OF A/C AMPLIFIER TO FROM TO **TERMINAL 15** OF A/C AMPLIFIER → **GROUND**, AND TURNS ON THE VSV TO AVOID LOWERING THE ENGINE RPM DURING AIR CONDITIONER OPERATION.

WHEN ANY OF THE FOLLOWING SIGNALS ARE INPUT TO THE A/C AMPLIFIER, THE AMPLIFIER OPERATES TO TURN OFF THE AIR CONDITIONER:

- ENGINE HIGH RPM SIGNAL
- COOLANT HIGH TEMP. SIGNAL IS HIGH
- A SIGNAL THAT THE TEMPERATURE AT THE AIR OUTLET IS LOW
- A SIGNAL THAT THERE IS A LARGE DIFFERENCE BETWEEN ENGINE RPM AND COMPRESSOR RPM
- A SIGNAL THAT THE REFRIGERANT PRESSURE IS ABNORMALLY HIGH OR LOW

SERVICE HINTS

A 4 A/C MAGNET CLUTCH
4–GROUND : APPROX. **3.7** Ω

A 5 A/C PRESSURE SW
3–2 : OPEN ABOVE APPROX. **13.5** KG/CM^2 (**192** PSI, **1323** KPA)
CLOSED BELOW APPROX. **10** KG/CM^2 (**142** PSI, **980** KPA)
1–4 : OPEN WITH PRESSURE LESS THAN **2.1** KG/CM^2 (**30** PSI, **206** KPA) OR ABOVE **27** KG/CM^2 (**384** PSI, **2648** KPA)

A17 A/C AMPLIFIER
8–15 : CONTINUITY WITH A/C SW (A/C CONTROL ASSEMBLY) ON AND IGNITION SW AT **ON** POSITION
14–15 : ALWAYS CONTINUITY
14–GROUND: ALWAYS CONTINUITY
15–GROUND: ALWAYS CONTINUITY
13–GROUND: APPROX. **12** VOLTS WITH IGNITION SW ON

A26 A/C THERMISTOR
1–2 : APPROX. **4852** Ω AT **0**˚C (**32**˚F)
APPROX. **2341** Ω AT **15**˚C (**39**˚F)
APPROX. **1500** Ω AT **25**˚C (**77**˚F)

B 6 BLOWER RESISTOR
1–3 : APPROX. **0.48** Ω
3–2 : APPROX. **0.94** Ω
2–4 : APPROX. **0.91** Ω

W 4 WATER TEMP. SW (FOR FANS CONTROL)
1–2 : OPEN ABOVE APPROX. **90**˚C (**194**˚F)
CLOSED BELOW APPROX. **83**˚C (**181.4**˚F)

○ : PARTS LOCATION

CODE		SEE PAGE	CODE		SEE PAGE	CODE		SEE PAGE
A 2		26 (5S–FE), 27 (4A–FE)	**A20**	B	28	**E 5**	B	29
A 3		26 (5S–FE), 27 (4A–FE)	**A26**		28	**E 7**	A	29
A 4	A	26 (5S–FE), 27 (4A–FE)	**A30**		28	**J 4**		29
	B	26 (5S–FE), 27 (4A–FE)	**B 4**	A	28	**J 5**		29
A 5		26 (5S–FE), 27 (4A–FE)		B	28	**J 6**		29
A 6		26 (5S–FE), 27 (4A–FE)	**B 6**		28	**R 1**		26 (5S–FE), 27 (4A–FE)
A17		28	**C 2**	A	26 (5S–FE), 27 (4A–FE)	**R 4**		29
A18	A	28	**C 3**	B	26 (5S–FE), 27 (4A–FE)	**W 4**		26 (5S–FE), 27 (4A–FE)

⬭ : RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
4	24	R/B NO. 4 (RIGHT KICK PANEL)
5	24	R/B NO. 5 (ENGINE COMPARTMENT FRONT RIGHT)

⬭ : JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
1H	18	ENGINE ROOM MAIN WIRE AND J/B NO. 1 (LEFT KICK PANEL)
2A	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2C	20	ENGINE WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2D	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2E		
3A	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)

▭ : CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
EA1	32 (5S–FE)	COWL WIRE AND ENGINE ROOM MAIN WIRE (FRONT SIDE OF RIGHT FRONT FENDER)
	34 (4S–FE)	
EB2	32 (5S–FE)	ENGINE WIRE AND COWL WIRE (REAR SIDE OF RIGHT FRONT FENDER)
	34 (4S–FE)	
IG1	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)
IH1	36	ENGINE WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)
IJ1	36	COWL WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)
IQ4	36	COWL WIRE AND A/C NO. 2 WIRE (BESIDE HEATER UNIT)

: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (5S–FE)	FRONT RIGHT FENDER
	34 (4A–FE)	
EB	32 (5S–FE)	FRONT LEFT FENDER
	34 (4A–FE)	
ID	36	LEFT KICK PANEL
IG	36	R/B NO. 4 SET BOLT

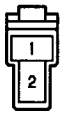
: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 2	32 (5S–FE)	ENGINE ROOM MAIN WIRE	**E10**	32 (5S–FE)	COWL WIRE
	34 (4A–FE)			34 (4A–FE)	
E 3	32 (5S–FE)		**I 2**	36	
	34 (4A–FE)		**I 3**		
E 4	32 (5S–FE)		**I 7**	36	ENGINE WIRE
	34 (4A–FE)		**I 8**	36	COWL WIRE
E 7	32 (5S–FE)	ENGINE WIRE	**I12**	36	A/C NO. 1 WIRE
	34 (5S–FE)				

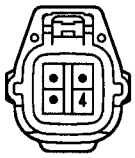
A 2 BLACK



A 3 BLACK



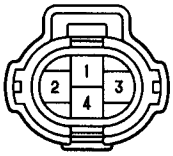
(5S-FE) A 4 GRAY



(4A-FE) A 4 GRAY



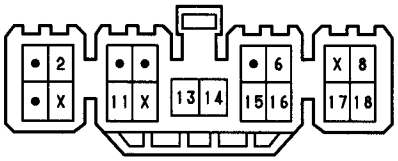
A 5 BLACK



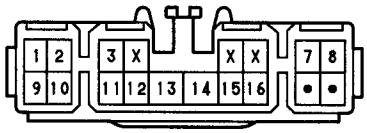
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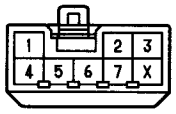
A17



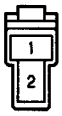
A18



A20



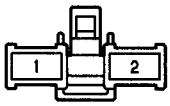
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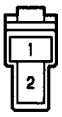
A30 GRAY



(5S-FE) B 4 BLACK



(4A-FE) B 4 BLACK



B 6 BLACK



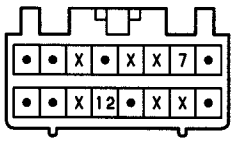
C 2 DARK GRAY



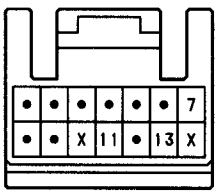
C 3 DARK GRAY



E 5 DARK GRAY



E 7 DARK GRAY

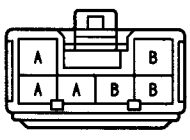


J 4



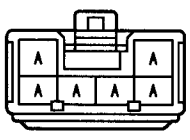
(HINT:SEE PAGE 7)

J 5



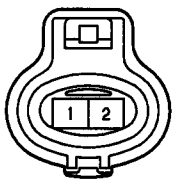
(HINT:SEE PAGE 7)

J 6



(HINT:SEE PAGE 7)

R 1 GRAY



R 4



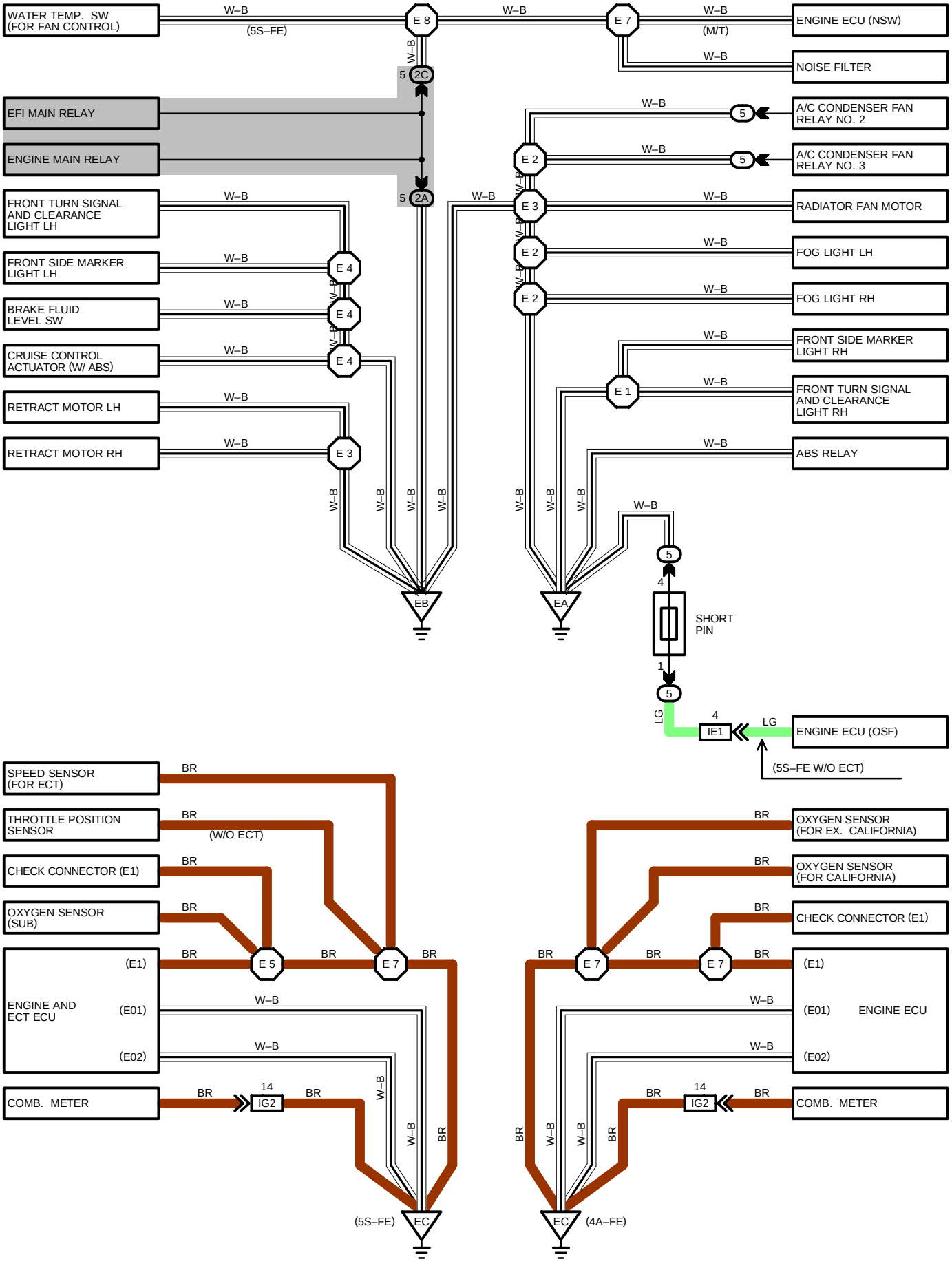
(5S-FE) W 4

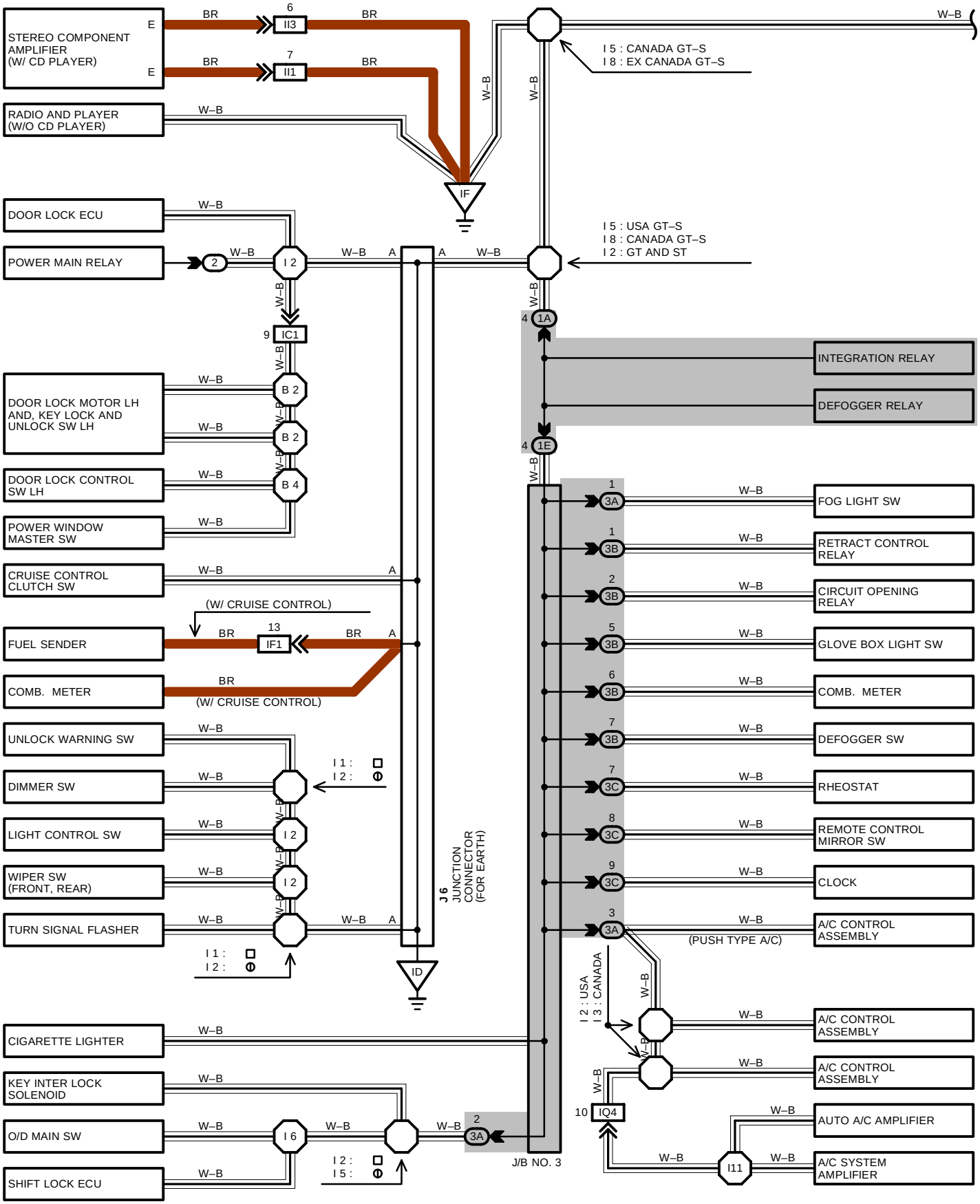


(4A-FE) W 4 BLACK

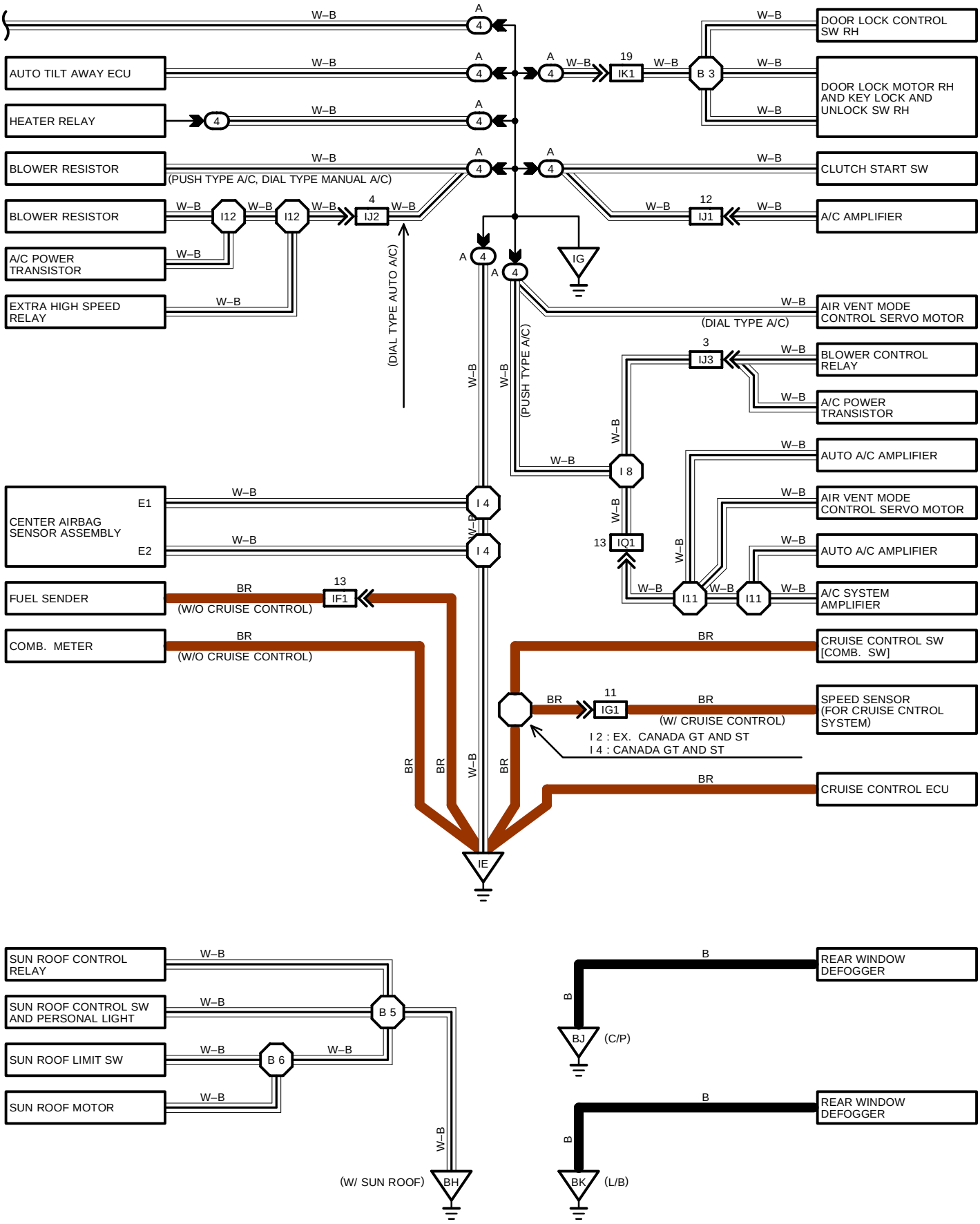


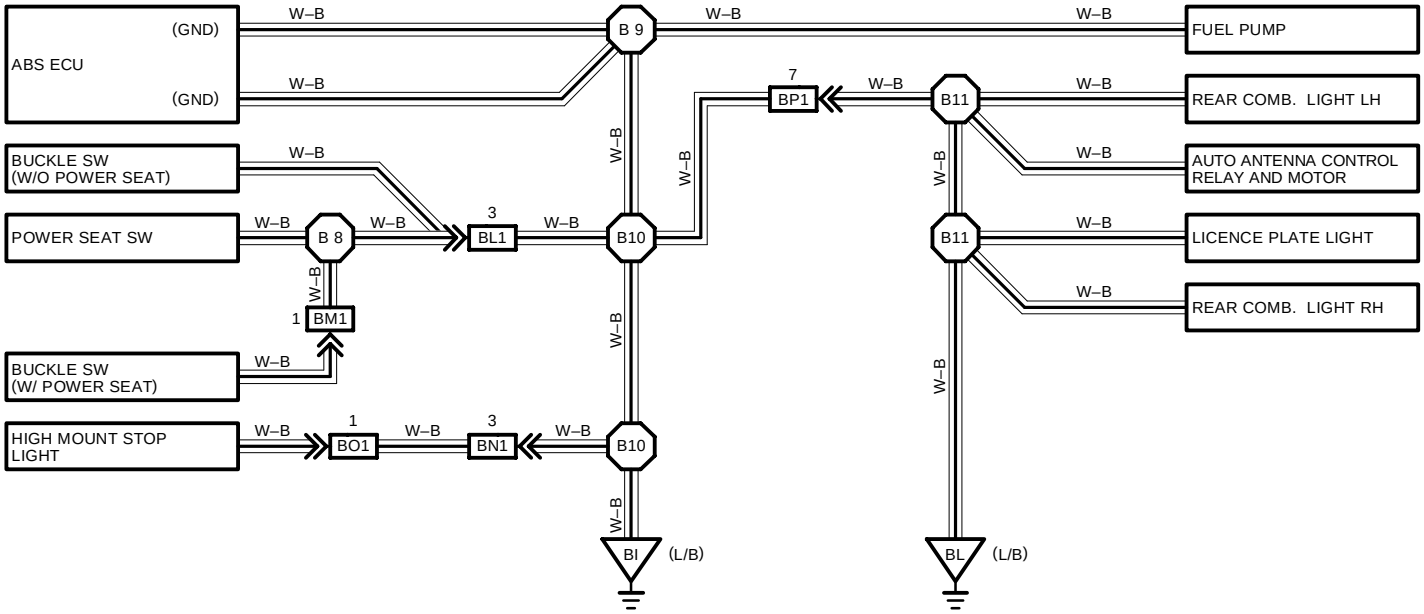
GROUND POINT

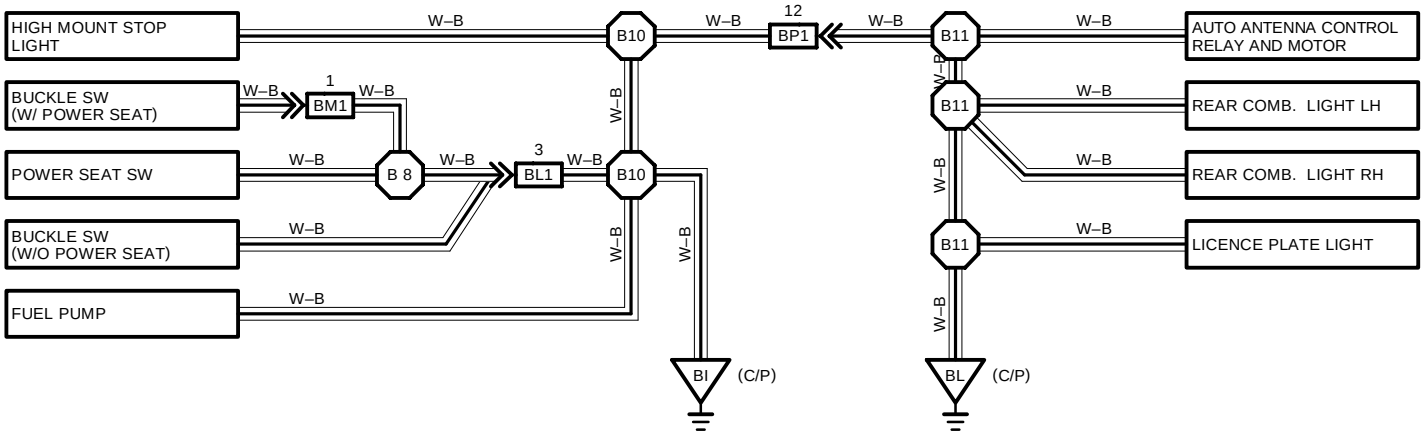



STEREO COMPONENT AMPLIFIER (W/ CD PLAYER)
RADIO AND PLAYER (W/O CD PLAYER)
DOOR LOCK ECU
POWER MAIN RELAY
DOOR LOCK MOTOR LH AND, KEY LOCK AND UNLOCK SW LH
DOOR LOCK CONTROL SW LH
POWER WINDOW MASTER SW
CRUISE CONTROL CLUTCH SW
(W/ CRUISE CONTROL)
FUEL SENDER
COMB. METER
(W/ CRUISE CONTROL)
UNLOCK WARNING SW
DIMMER SW
LIGHT CONTROL SW
WIPER SW (FRONT, REAR)
TURN SIGNAL FLASHER
CIGARETTE LIGHTER
KEY INTER LOCK SOLENOID
O/D MAIN SW
SHIFT LOCK ECU
I 5 : CANADA GT–S
I 8 : EX CANADA GT–S
I 5 : USA GT–S
I 8 : CANADA GT–S
I 2 : GT AND ST
INTEGRATION RELAY
DEFOGGER RELAY
FOG LIGHT SW
RETRACT CONTROL RELAY
CIRCUIT OPENING RELAY
GLOVE BOX LIGHT SW
COMB. METER
DEFOGGER SW
RHEOSTAT
REMOTE CONTROL MIRROR SW
CLOCK
A/C CONTROL ASSEMBLY
(PUSH TYPE A/C)
A/C CONTROL ASSEMBLY
A/C CONTROL ASSEMBLY
AUTO A/C AMPLIFIER
A/C SYSTEM AMPLIFIER
J/B NO. 3
J6 JUNCTION CONNECTOR (FOR EARTH)
I 2 : USA
I 3 : CANADA

GROUND POINT




ABS ECU
(GND)
(GND)
W–B
B 9
FUEL PUMP
BP1
B11
REAR COMB. LIGHT LH
BUCKLE SW
(W/O POWER SEAT)
AUTO ANTENNA CONTROL
RELAY AND MOTOR
POWER SEAT SW
B 8
BL1
B10
LICENCE PLATE LIGHT
BM1
REAR COMB. LIGHT RH
BUCKLE SW
(W/ POWER SEAT)
HIGH MOUNT STOP
LIGHT
BO1
BN1
BI
BL
(L/B)


HIGH MOUNT STOP
LIGHT
W–B
B10
BP1
B11
AUTO ANTENNA CONTROL
RELAY AND MOTOR
BUCKLE SW
(W/ POWER SEAT)
BM1
REAR COMB. LIGHT LH
POWER SEAT SW
B 8
BL1
REAR COMB. LIGHT RH
BUCKLE SW
(W/O POWER SEAT)
LICENCE PLATE LIGHT
FUEL PUMP
BI
BL
(C/P)

GROUND POINT

: PARTS LOCATION

CODE	SEE PAGE	CODE	SEE PAGE	CODE	SEE PAGE
J 6	29				

: RELAY BLOCKS

CODE	SEE PAGE	RELAY BLOCKS (RELAY BLOCK LOCATION)
2	23	R/B NO. 2 (LEFT KICK PANEL)
4	24	R/B NO. 4 (RIGHT KICK PANEL)
5	24	R/B NO. 5 (ENGINE COMPARTMENT FRONT RIGHT)

: JUNCTION BLOCK AND WIRE HARNESS CONNECTOR

CODE	SEE PAGE	JUNCTION BLOCK AND WIRE HARNESS (CONNECTOR LOCATION)
1A	18	COWL WIRE AND J/B NO. 1 (LEFT KICK PANEL)
1E		
2A	20	ENGINE ROOM MAIN WIRE AND J/B NO. 2 (NEAR THE BATTERY)
2C	20	ENGINE WIRE AND J/B NO. 2 (NEAR THE BATTERY)
3A	22	COWL WIRE AND J/B NO. 3 (BEHIND COMBINATION METER)
3B		
3C		

: CONNECTOR JOINING WIRE HARNESS AND WIRE HARNESS

CODE	SEE PAGE	JOINING WIRE HARNESS AND WIRE HARNESS (CONNECTOR LOCATION)
IC1	36	FRONT DOOR LH WIRE AND COWL WIRE (LEFT KICK PANEL)
IE1	36	ENGINE ROOM MAIN WIRE AND COWL WIRE (LEFT KICK PANEL)
IF1	36	FLOOR WIRE AND COWL WIRE (LEFT KICK PANEL)
IG1	36	ENGINE WIRE AND COWL WIRE (UNDER THE ENGINE ECU)
IG2		
II1	36	COWL WIRE AND CONSOLE BOX WIRE (INSTRUMENT PANEL CENTER)
II3		
IJ1	36	COWL WIRE AND A/C NO. 1 WIRE (BEHIND THE GLOVE BOX)
IJ2		
IJ3		
IK1	36	FRONT DOOR RH WIRE AND COWL WIRE (RIGHT KICK PANEL)
IQ1	36	COWL WIRE AND A/C NO. 2 WIRE (BESIDE HEATER UNIT)
IQ4		
BL1	38 (L/B) 40 (C/P)	FLOOR WIRE AND FRAME WIRE (LEFT SIDE OF FRONT FLOOR PANEL)
BM1	38 (L/B) 40 (C/P)	FRAME WIRE AND SEAT WIRE (UNDER THE DRIVER'S SEAT)
BN1	38 (L/B)	BACK DOOR NO. 1 WIRE AND FLOOR WIRE (LEFT SIDE OF PACKAGE TRAY TRIM)
BO1	38 (L/B)	BACK DOOR NO. 1 WIRE AND BACK DOOR NO. 1 SUB WIRE (BACK DOOR UPPER LEFT)
BP1	38 (L/B)	FLOOR WIRE AND LUGGAGE ROOM WIRE (LEFT QUARTER PANEL CENTER)

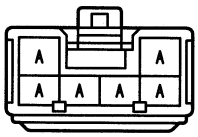
: GROUND POINTS

CODE	SEE PAGE	GROUND POINTS LOCATION
EA	32 (5S–FE) 34 (4A–FE)	FRONT RIGHT FENDER
EB	32 (5S–FE) 34 (4A–FE)	FRONT LEFT FENDER
EC	32 (5S–FE) 34 (4A–FE)	INTAKE MANIFOLD
ID	36	LEFT KICK PANEL
IE	36	INSTRUMENT PANEL BRACE LH
IF	36	INSTRUMENT PANEL BRACE RH
IG	36	R/B NO. 4 SET BOLT
BH	38 (L/B)	ROOF LEFT
BI	38 (L/B)	UNDER THE LEFT CENTER PILLAR
BJ	40 (C/P)	RIGHT REAR PILLAR (C/P)
BK	38 (L/B)	BACK DOOR RIGHT (L/B)
BL	38 (L/B) 40 (C/P)	BACK PANEL CENTER

: SPLICE POINTS

CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS	CODE	SEE PAGE	WIRE HARNESS WITH SPLICE POINTS
E 1	32 (5S–FE)	ENGINE ROOM MAIN WIRE	I11	36	A/C NO. 2 WIRE
	34 (4A–FE)		I12	36	A/C NO. 1 WIRE
E 2	32 (5S–FE)		B 2	38 (L/B)	FRONT DOOR LH WIRE
	34 (4A–FE)			40 (C/P)	
E 3	32 (5S–FE)		B 3	38 (L/B)	FRONT DOOR RH WIRE
	34 (4A–FE)			40 (C/P)	
E 4	32 (5S–FE)		B 4	38 (L/B)	FRONT DOOR LH WIRE
	34 (4A–FE)			40 (C/P)	
E 5	32 (5S–FE)	ENGINE WIRE	B 5	38 (L/B)	ROOF WIRE
	34 (4A–FE)			40 (C/P)	
E 7	32 (5S–FE)		B 6	38 (L/B)	
	34 (4A–FE)			40 (C/P)	
E 8	32 (5S–FE)		B 8	38 (L/B)	FRAME WIRE
I 1	36	COWL WIRE		40 (C/P)	
I 2			B 9	38 (L/B)	FLOOR WIRE
I 3			B10		
I 4				40 (C/P)	
I 5			B11	38 (L/B)	LUGGAGE ROOM WIRE
I 6				40 (C/P)	
I 8	36	COWL WIRE			

J 6



(HINT:SEE PAGE 7)